



Letters to the editor

Recruiting future engineers

It is 250 years this month since Nicholas Hawksmoor died and since an acquaintance with his architecture has been one of the most rewarding experiences in my life I feel the need to pay a personal tribute to him. I am not an expert about Hawksmoor and never will be; nobody knows more about him than Professor Kerry Downes, who wrote the first major study of him as an individual in his own right and continues to throw more and more light on his shadowy figure.

For Hawksmoor's reputation was for a long time inextricably entwined with that of Sir John Vanbrugh and he used not to be given the full recognition he deserves. It was the professional in Wren's office who joined the amateur Vanbrugh when the latter got the unexpected commission to design the grandest country house of the time (Castle Howard) and then the grandest palace ever built in this country (Blenheim). The partnership of the two was one of those accidents of history that seem inevitable once they have happened. Unlike many a partnership, they seem not to have fallen out with each other, but retained their mutual respect even in the middle of heated controversy among their clients.

Even after visiting it again for the umpteenth time, I cannot persuade myself that Blenheim is a truly great building. It is unmistakably grand in scale and impressive in its proportions and details, such as the carved trophies along the skyline drawn by Hawksmoor; but in the end it is vulgar. And I am not surprised that after it English architecture embraced the purer, more elegant and delicate palladian style. What came to be known (much later) as English baroque lay heavily on the ground but did not really take root or become thoroughly English, like the 18th century landscape garden.

Castle Howard, which was their first commission, was in many ways their best effort, both jointly and alone. Even the turning sideways of the plan by the Earl's son-in-law and the failure to complete the original conception could not deprive it of its spectacular massing. And the scale of the original details was in fact small enough to make them likeable in a way that Blenheim could never be. But it was in their individual buildings at Castle Howard that both Vanbrugh and Hawksmoor towards the end of their lives left the most personal, articulate and beautiful works of art.

Vanbrugh produced the Temple of the Four Winds, at the top of a rise at the end of the great grass walk winding away from the house. From that you look across the slopes and the classical bridge towards the mausoleum, which I would be prepared to hazard as being the greatest single work of architecture in Britain. Hawksmoor did that alone, though the steps and the outworks are later. Its ring of columns around the chapel are more closely spaced than they should be if it was a correct exercise in classical design; but the closeness gives just the right dramatic effect.

The dimensions are impeccable. The architect for the restoration told me that the vaults below are as accurately built as it is possible to be. If one day you have an opportunity to go inside the chapel above, do not hesitate. For inside that apparently dark and menacing opaque exterior on its lonely eminence is a chapel flooded with light and exquisitely carved to make the most of the shadows. It is light imprisoned in darkness, a wonderfully 18th century poetic conceit.

Patrick Nuttgens

Sir, - I have just read Stuart Wabe's analysis of the problem of the recruitment of engineering undergraduates (*THES*, March 21) and his proposal for dealing with the shortage of applicants.

He has concentrated on degree students with particular reference to the university sector, although it would have been useful to have seen the whole picture since the polytechnic contribution is not insubstantial.

I have one or two criticisms I would like to offer.

He suggests two or three A levels with passes in maths and physics as being the ideal background for engineering applicants. Fair enough; but more precisely, if he insists on confining his analysis to the universities, he should have mentioned the actual acceptable entry qualifications. These are three A levels with good grades, averaging 11 points, ie two Bs and a C. Many school leavers obtain two or three passes but are not acceptable to the universities and places then go unfilled, although it has been shown through the public sector institutions that six-point applicants are perfectly capable of obtaining good honours degrees in courses rigorously monitored by the Council for National Academic Awards.

Second, his statistics cover a period when increasing numbers of students have been leaving school (the bulge), but we are now entering a phase when decreasing total numbers will be coming forward. He might have extended his analysis to a projection of the likely impact of this for future quantity of applicants and quality of admissions.

Finally, his proposed solution is really no solution at all. However one tries to encourage students to take up engineering, by bribing their parents for example, after they have taken their A levels, you have still got to get the universities to accept them, and with lower points scores.

Interest factor

Sir, - Professor Fletcher's analysis of Graham Greene's position in the literary world ("Conrad's B-team" *THES*, March 21), throws up an important issue concerned with our response to literature. Having taught literature to secondary school students for several years, I have always been faced with the difficulty of making the A-team classics relevant to my readers' experiences of the modern world. This difficulty has been apart from the headache of trying to get them to read the actual texts involved.

My colleagues and I were beginning to get to the Leavisite position of questioning the value of "doing" literature at all. Recently we changed examination board to a new syllabus that had among its list several modern works, one of which was

Graham Greene's *The Human Factor*. Our students' responses were staggering. In Greene they found events, themes, and human emotions that were expressed in a way that was both understandable and directly relevant to their own experiences. The analysis of such issues as privacy, guilt were both complex and relevant.

Similar readings of Conrad's *Heart of Darkness* were not met with similar success. All this must bring into question the ontology of literary texts. Is Professor Fletcher's distinction between an A-team and a B-team really necessary? Is it at all relevant? I have my doubts.

Yours sincerely,
F. H. MIKADADI,
The Stoke High School,
Maldenham Approach,
Ipswich.

Missed opportunity

Sir, - Having looked forward for some weeks to your special section on management education (*THES*, March 21), and having now read it through twice, I must say that I am disappointed.

Disappointed on two grounds. Firstly, where is the editorial contribution from the public sector? Surely, to exclude the major provider of management education in this country from your special section provides us with a rather unbalanced perspective. It would have, for example, been stimulating to have read a commentary on the recent CNA position paper "Management Education and the Public Sector" as seen from a polytechnic or college viewpoint, and also perhaps, even from someone across the transatlantic divide. With this idea, may I also suggest that rather than Hugh Murray on Hugh Murray, why not a public sector view on his "radical proposal"?

My second ground for disappointment is, in a sense, far more disturbing, particularly at a time when every-

one within management education appears to agree on at least one thing, namely the pressing need to forge a genuine dialogue between all of us on the supply side of the business equation and all the thousands of employers and their managers on the demand side.

Despite *THE THES* tending to be "by educationalists for educationalists" surely when it comes to a vocational field such as management education, there is a need for at least one authoritative and confronting commentary from a buyer of our products and services. Unless we, in management education, continue to ensure that our offerings are relevant and current arguments about privatization or not, MBAs or not, and transatlantic co-operation or not.

THE THES has, through its columns, a clear opportunity to contribute to the debate on management education in this country. It does, for this year at least, seem to have missed this opportunity.

Yours faithfully,
D. J. M. KELLY,
Department of Business and
Management Studies,
City of Birmingham Polytechnic.

believe that it is both morally indefensible and also short-sighted to put students in the position of feeling obliged to enter engineering courses in order to save their parents from having to make any financial contribution to their grants. Far from ensuring "a dramatic decline in the wastage rate", it will more likely result in an increase, as many students later react against the pressures brought to bear on them to enter courses they did not freely choose for themselves.

The proposal may not be divisive within the student population, as Stuart Wabe suggests, but it will cause rifts within families as parents try to exercise their influence upon the choice of course for all the wrong reasons. Students must be free to decide for themselves what they wish to study in higher education, within the constraints imposed by the numbers of places available in different disciplines and the degree of competition for them.

Rather than use parental interference, it would be much better (i) for engineers to market engineering courses in schools more effectively in order to attract a larger number of suitably qualified students away from the pure sciences (which, as school subjects, probably have an in-built advantage), and (ii) to increase the proportion of students taking A level science with maths relative to all A level candidates by attracting more and better science and maths teachers into schools through better pay and career structures.

Many problems can be solved - and can only be solved - by throwing money at them. The important thing is to throw the money in the right place for the right reasons.

Yours faithfully,
DR PETER GOLD,
Department of Modern Languages,
Sheffield City Polytechnic.



Graham Greene: understandable and relevant

Sheffield challenge

Sir, - Patrick Nuttgens' grapevine (*THES*, February 28) may be extensive but it could be growing wild and certainly is in urgent need of attention. The Sheffield branch is definitely unhealthy if it tells him that "the education service in the people's republic is dominated by full-time politicians who have taken over the work that has traditionally been done by officials".

It is the case that Sheffield has more than its fair share of committed and well-informed politicians on its education committee - that's the way it should be and it's no bad thing if it makes my job more challenging - but my members certainly expect me to be responsible for the management of the service and are concerned that I should have a strong team to carry out that task - my senior management team has been significantly strengthened since I took up my post a year ago. Beyond this they expect forthright advice from their chief education officer.

Yours faithfully,
BILL WALTON,
Chief education officer, Sheffield.

Choices, not censorship

Sir, - The article by William K. ... your edition of January 21, ... of error, misrepresentation, ... undocumented allegation.

Just to make things perfectly clear, we in the Department of Education do not "censor" anything. We do, however, have to determine which ... nifty draft publications submit ... in the course of a year are ... subject certain publications ... criteria and standards that the ... of Management and Budget has ... ulgated, with respect to avoid ... less publication. These latter ... dures, it is very important to po ... do not apply to the fruits of "rese ... We don't have the resource ... publish everything, not even ... ports or results of everything ... make choices. How to make th ... choices? I believe that we sh ... employ expert advice from our ... scholars as to which items ar ... greatest significance and worth. Th ... what we mean by "peer review" in ... context.

At worst, the authors of manus ... that we cannot publish will have ... manuscripts released for private pu ... lication in a journal, by a commerci ... publisher or in other ways that do ... require government funding.

This has been our policy. It is a ... plan. Your reporter plainly does ... understand it. What grieves him ... so far as I know, he didn't even try.

Sincerely,
CHESTER E. FIRM, JR.
Assistant secretary and
counsellor to the Secretary,
Department of Education,
USA.

Some belated advice for Liverpool's ... Millington city council from former ... Labour education minister and ... North East London Polytechnic ... director Mr Gerry Fowler.

Writing a reference for his NELP ... deputy Peter Toynne, successful ... candidate for the Liverpool ... polytechnic rectorship, Mr Fowler ... added that given his former political ... experience he would just like to ... say ... how disgraceful he found ... the city council's management of ... polytechnic financial affairs. So ... there.

Fodder for the wet-watchers

Can it be that critics of Mr Christ ... opher Patten, now struggling to throw ... of his "wet" image in the battle for ... succession at the Department of ... Education and Science, were right all ... along?

Mr Patten, drafted into the DES as ... Minister of State and the acceptable ... face of Toryism, is extending his ... hospitality even as far as the notori ... ously left-wing Socialist Education ... Association (president Mrs Caroline ... Bran).

Mr P. the first Conservative minis ... ter to grant an audience to the SEA, is ... in slightly more congenial territory ... this week speaking to the middle-of ... the-road Assistant Masters and Mis ... tresses Association. But his rival Dr ... Rhodes Boyson, Black Paperite and ... junior Northern Ireland Minister, is ... booked for the real home game with ... an address the same day to the ... Federation of Conservative Students.

Bridge over troubled waters

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ETHICS

Case of the headless body

Manchester Polytechnic has strayed into a Labour Party row which has left its governing body temporarily without a chairman. At the centre of the trouble is ousted leader of the city council, university lecturer Mr Norman Morris, who has chaired the governors for more than seven years.

The governing body tried to co-opt Mr Morris when his term as a local authority representative expired, but the appointment was vetoed by the city council. No reasons were given and now the polytechnic has renominated him, threatening to take the matter up with the Department of Education and Science if he is rejected again. The matter will come to a head next month, when the council's response will be known and a new chairman has to be elected.

Similar tensions in North East London Polytechnic, where the long-serving chairman of governors Councillor Arthur Edwards has been de-elected for his Newham Council ward. Attempts to co-opt him on to the polytechnic governors have so far failed, and unless he finds another Newham seat shortly, NLEPs new left governors face reconciling themselves to a chair from among the representatives of the backing old guard Labour Party.

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Big slump in student support for Tories

by David Jobbins

A big slump in student support for the Conservatives was blamed this week on government policies on grants and entitlement to welfare benefit.

In a poll conducted for the National Union of Students, only 17 per cent of students indicated they would vote Conservative in an immediate general election, compared with a claimed student vote for the party of 42 per cent in the 1983 general election.

Conducted for NUS by Marplan, the survey of voting intentions gave Labour the lead with 35 per cent, with the Alliance 8 per cent behind.

And this week Mr Phil Woolas, president of the NUS, warned that many of the Conservative marginals where student voters' number more than the 1983 election majority could be vulnerable.

NUS has identified 32 Conservative MPs who have yet to respond positively to its campaign and could be at risk. Majorities range from seven to 5,715.

Mr Woolas said that on the basis of Conservative claims of a 42 per cent student vote in 1983, there had been a large swing against the Government - enough to lose every seat on the NUS list of student marginals.

And he put part of the blame on the Federation of Conservative Students, which was holding its annual conference in Scarborough this week. "These results show what happens when Conservative student leaders spend time carrying guns in Nicaragua and organizing spy rings on campus, as opposed to putting the Conservative point of view across to students," he said. "The FCS is an embarrassment to the Conservative Party and its supporters."

Months of speculation over the appointment of a new chief scientist ended last week with the appointment of Dr John Fairclough, director of development and manufacturing at IBM.

His predecessor, Sir Robin Nicholson, announced his own departure late last year but it is understood that difficulties in timing Dr Fairclough's release from IBM delayed the new appointment. Sir Robin has continued to service Cabinet committees despite taking up his new appointment.

Dr Fairclough will begin a two-year secondment from IBM next month, working in the Cabinet office as a deputy secretary. He already has direct experience of many of the key Government scientific bodies, having served on the Advisory Council for Applied Research and Development, the Engineering Council, the Butcher committee on information technology and the Information Technology Skills Agency.

He has had close involvement with higher education as chairman of IBM Laboratories and was the driving force behind the company's spate of academic initiatives in recent years.

Poly's £21m boost to local economy

by Karen Gold

Wolverhampton Polytechnic is worth £21 million and more than 2,000 jobs a year to the local economy, a study by a polytechnic lecturer has found.

In a paper presented to the polytechnic governors, economics lecturer Dr Jackie Lewis argues that in addition to the 1,331 people employed directly by the polytechnic, more than 700 are also kept working by the polytechnic's presence in the local economy.

More than £6 million is spent locally directly by the polytechnic, and another £6 million by the two-thirds of the students who come from outside the West Midlands. Another £12 million goes into the local economy in the wages the polytechnic pays its staff, Dr Lewis argues. The circulation of this money is what creates the

Battle for students' cash grows

by Peter Aspden

The campaign among universities and polytechnics urging the Government to reconsider its decision over student finance is gathering momentum nationally.

Parents of students have been identified as a key target in the campaign, in the hope that they can bring about a reversal in Government thinking similar to that of November 1984, when the Secretary of State for Education, Sir Keith Joseph, was forced to scrap plans to make parents contribute towards tuition fees.

About a dozen vice chancellors have already written joint letters with the presidents of their students' unions emphasizing the gravity of the situation to parents.

They were joined this week by the director of Brighton Polytechnic, Mr Geoffrey Hall, who said in his letter that some students stood to lose up to £800 in their annual income as a result of the Government's new proposals.

But just across the road from the polytechnic, the vice chancellor of Sussex University, Sir Denis Wilkinson, has turned down a request from the students' union to write a similar letter.

He said it was an abuse of confidential information - parents' addresses - to deliver a political message in such a way, and that it was doubtful whether a consensus on the issue existed within the university anyway.

UGC to vet schools of architecture

by Patricia Santinelli

Every university school of architecture is to be assessed by the University Grants Committee in an exercise starting in either May or June.

The UGC technology subcommittee is to examine not only the work of each department but also the standing of the parent institution. Each school is to get the equivalent of a visiting board with co-opted members with direct experience of architecture.

The first institution to be examined is likely to be Sheffield University school of architecture, which was due for a visit from the technology subcommittee in May.

This was revealed by Professor Douglas Wise, a member of the UGC subcommittee, who was invited to address the Royal Institute of British Architects' council last week.

Last month he warned that at least one of five schools of architecture might be closed.

Speaking in his personal capacity as professor of architecture at York University Professor Wise said there could be more than one closure.

He speculated that the visiting board would find at least five schools with intakes below that recommended by the Escher report. This weakened position would be the result of the cuts in July 1981 and December 1985, as well as the proposed 30 per cent reduction in part two courses.

He said that the UGC's new funding programme also represented an indirect threat to the departments of architecture. As universities received less money, they would seek cuts in the weakened departments. This was compounded by the fact that the UGC regarded architecture as being expensive.

Professor Wise urged the RIBA to make immediate representations to the UGC about the unit of resource being set for architecture. Escher had recommended this should be at the same level as engineering - it was currently half - but the UGC had no plans to increase it. Later RIBA council agreed to make representations.

Professor Wise warned too of threats to the five-year course which he said the UGC regarded as very expensive and not as academically supportable. He advised the profession and education to establish a dialogue on what the contents of a four-year course should be, before it was forced upon them.

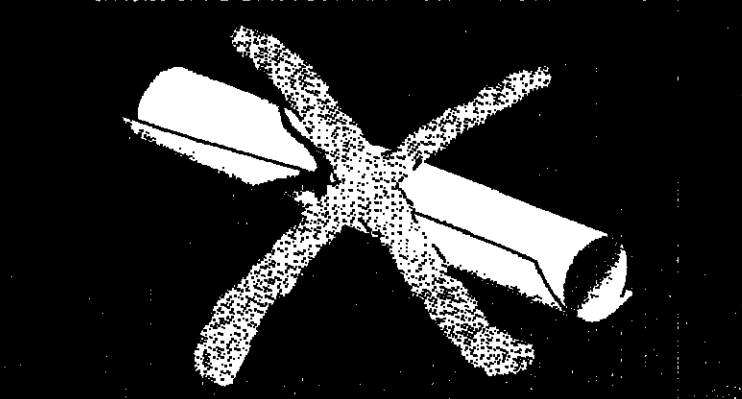
Liverpool names new rector

Mr Peter Toynne, deputy rector of North East London Polytechnic, has been appointed to the rectorship of Liverpool Polytechnic. Mr Toynne, 46, has been at NELP since 1983. Previously he was deputy director at the West Sussex Institute of Higher Education. He takes up the Liverpool post, vacated by the new rector of the art and design London Institute Mr John McKenzie, in September.

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DON'S
DIARY

SUNDAY

Last teaching week of term. The great advantage of Sunday is that there is no set in. Lack of post out not so good. Breakfast in bed for wife and the two girls. Nothing much in the Sundays, so get through by 10.30. I'm managing to cut down on non-professional reading, but still need the *Sundays*, *The Times*, the *Spectator*, *Private Eye*, and the *New Yorker* to keep decently well informed. In the afternoon, make two dozen hamburgers and a dozen packets of barbecue sauce for the freezer. Non-university friends to informal supper. Much as I do like the liberal intellectual atmosphere of Anglophone university communities, and often find "outsiders" depressingly naive, I also find much stimulation in the company of what I suppose have to be the more sophisticated non-academics of the neighbourhood. It is a significant advantage of academic life that we generally meet only people who behave well, even when professionally cutting one another's throats. The business world is a lot duller and nastier.

MONDAY

Pattern of life dictated by having accepted early retirement with three year re-engagement. Financially irresistible deal if you had a chair in 1970 and became 55 in 1984, so do not now have to go to committees (except investments), partly also because here they never have serious business to discuss. However 10th week means half an hundred essays to mark, and about double that number of reports to write. Cannot, however, decently complain. I do not live in an office, keep office hours, or commute. My wife, the two girls and I are all within five minutes' walk of our places of work/study. We do have, but don't really need a car. Most of the day goes on getting everyone up, off, dealing with the post at home and in the office, shopping, getting everyone's lunch, dealing with private business matters. Serious writing does not start till after 5pm, but then comes a bit near enough midnight, with a break for supper, which is also a sort of staff meeting to discuss who does what tomorrow. Lamentably, this means letting children eat in front of the TV.

TUESDAY

Nine o'clock lecture, re-scheduled owing to sickness of colleague, so no one has read the text, and I cannot even pretend that they should have. Two other morning classes. Infatuated by student trivialization of literature, so take calculated risk, describing Voltaire's *Candide* as the great "FPO" (to God, I suppose). Go off to lunch to wait till 1.15. How do you explain to students that identifying the triviality of a text is itself a serious activity? Sure enough, Simon, the student who lives in the house, pops up for a night-hall in his pub. I explain lapse from Mandarin into Cantonese as exasperation. He says, rightly, that professors are expected to confine themselves to Mandarin. Refrain from asking whether they are also expected to be able to teach. One of my brightest first-years apparently said I could. The interesting thing is that this is one of the very few non-campus universities in the world and that, probably therefore, that information came back, obviously via the usual means, just occasionally I have heard on the phone from London what is still going on at a nearby down the road. Universities work a lot better if they are properly integrated into towns.

WEDNESDAY

Most of finalists now have job offers, but I still write references daily. Row

with secretary. Am I responsible to job-seekers or to job-offers? She thinks I ought to tell the whole truth. I think I won't until prospective employers pay my institution for my opinion. I never lie, but if ICT's personnel department cannot read silences (they can't), it is surely their fault? Had long discussion on this matter in Canberra six months ago, and realise I'm tarred with Oxbridge brush, or do I mean feathers? Incidentally, why are Australians so keen on the Agatha Christie *Miss Marple* and the *Yes, Prime Minister* series? Must be significant that the Australian telephone directory says I live in "UK", while the New Zealand directory says it is "GB".

Have crowd of students in for sherry to demonstrate to them how modern hi-fi makes music a product of sound engineering. They are miles behind their times. Why don't they write essays on word-processors (terminals liberally available, and mainframe able to take 200 users at once)? Why don't they realise that drawing-room hi-fi allows you to hear the word-processor terminal not standard equipment in lecturers' rooms, like telephones? Universities miles behind their times, too? Nice to be a bit non-tech?

THURSDAY

Actually devoted to constituting home office against retirement. Two big book contracts. Dead serious decision to write the books, which I owe to myself, some sort of tribute to 20 years of teaching and research. Home office is easy enough: word-processor, electronic typewriter with French and English disjunctive wheels. A4 electronic copier. No more carbon paper. Lots of change out of £1,000. The books will achieve for me posthumous fame, which by definition I can live without. Why write them? If what I have to say is right, somebody else will one day say it, and if it isn't then it shouldn't be said. "Research" turns out to be self-indulgence? Actually no. "Research" is a method of putting round an opinion and asking for a peer-group review. No one is either quite right or quite wrong. We actually owe it to the profession and to our pay-masters, the public, to publish, for peer-group review, what we have come to think.

FRIDAY

The rhythm of the academic year is important. The US is easier than the UK, since the seasons are the same. Three winters in succession is one too many. In October, you get the first year into orbit. By Easter, you have to cope with finalists. All have some, and some have all, of three problems. What do I do about getting a job? What do I do about carrying on/getting rid of boy/girl-friend? What about my degree, and tax-payers for having wasted my time? The answers are fairly clear: at that age, you never waste your time. You should probably spend all of 12 weeks trying to improve the class of your degree, and you probably shouldn't marry, although to one apart from you is qualified to have an opinion. You either do or don't have a job. I am unqualified to advise anyone about anything, but if I did understate myself, you are quite certainly cleverer than you think.

SATURDAY

Some evening late-wiping for finalists' boy/girl friends, so get all of four hours sleep. Are they really adult at 18? They want a student counsellor vision for special attention not afforded to the rest of their age-group, but savagely reject the valid reasons for providing it, which have to do with stress imposed on privileged élite in the course of education. Moral from the week is that life is short, art long, and literature very largely the means by which societies move value-systems. That is now the way we interact. The pace of cultural change is getting faster than most of us can cope with.

A. H. T. Levi

The author is professor of French language and literature at St Andrews University.

A knight's call to battle

by Peter Aspdren

Confidence is the key to all success; a simple piece of analysis, admittedly, but one which has been enjoyed and exploited by sloganeering toothpaste manufacturers and desperate football managers over the years. Now, it seems set to become the rage among those troubled breed of modern-day soothsayers, academic economists.

The pioneer of this spring's message, unveiled at a House of Lords press conference no less, is Sir Alan Walters, formerly personal economic adviser to Mrs Thatcher and, controversially, author of the provocatively-titled *Britain's Economic Renaissance*. It is a book with much theory, many numbers, but a simple message—confidence is the key.

Sir Alan, currently professor of political economy at Johns Hopkins University, Maryland, confessed that this was an elusive concept which defied rigorous analysis. "I recognize it is a label for my ignorance, but it is important to have labels of ignorance, then you can find out what's important and talk about it."

The real aim of his book is to spark off a radical rethink of orthodox macroeconomic theory, as featured in key textbooks and as taught in universities and schools. The basis of Mrs Thatcher's success, he claims, has been her departure from the prevailing Keynesian doctrine of increasing aggregate demand whenever the economy was in trouble.

This established a much-needed climate of financial stability which has acted as a backdrop for Britain's

economic recovery over the last five years. Troubled by the fact that the fiscal policies urged by textbooks was not proven by real world evidence, Sir Alan went back to the basic works of Marshall and Keynes.

"Even Keynes identifies confidence as an absolutely crucial factor in macroeconomics," he found. "If Mrs Thatcher had increased the fiscal deficit in 1981, as most academic economists wanted her to, that would have created conditions which everyone knew would have had to be put right." Therefore cycles, uncertainty, no confidence.

"The thing that shatters confidence is when people think Government is going to do something stupid." An example of a stupid Government? You



Sir Alan Walters: confidence

MSC opens £50m door to broader access

by Maggie Richards

The Manpower Services Commission is on the brink of a major new initiative in open learning, and poised to commit up to £50 million to the deal.

Designed to follow in the wake of the Open Tech project, which comes to an end in 1987, the new initiative is planned as a joint exercise to be undertaken in conjunction with the Department of Education and Science.

The aim will be to "embed" open learning in both the vocational and non-vocational sectors of the education system, fully utilizing the experience gained during the Open Tech project and from other distance learning operations — notably the Open University.

At their meeting last week members of the commission agreed to back the new initiative with an initial cash injection of £10 million.

The MSC will also be asking the government to approve expenditure of £10 million per annum for a further four years.

The commission has suggested the establishment of a national steering group for open learning, to include both MSC and DES representatives, and there would also be extensive collaboration with local authorities.

The new group would map out the extent of current provision and identify areas for development.

Detailed consideration of the proposal is now underway, with the MSC expected to give formal consent to the scheme in the autumn.

Announcing the new initiative Mr Bryan Nicholson, chairman of the MSC, said the cash was not being provided to boost funding to existing

Open Tech projects — most of which were intended to become self-supporting by next year.

Some financial aid might be given to certain projects to assist new developments, but the main aim would be to create a major national strategy for open learning.

One area the MSC is keen to explore, for example, is the possibility of instituting some quality control systems so that standards within open learning are assessed and guaranteed to clients — particularly employers.

Another new venture under consideration by the MSC is the creation of a national computer information service on training.

The MSC would hope to broaden access to training by offering a walk-in advice service, based at such sites as job centres, educational institutions, libraries and banks.

Aimed at the public generally, but more especially at employers, the service would allow an individual to obtain information on training programmes on offer, including open learning programmes. If more specific counselling were required the user would be directed to a local training agent — a college or job centre — for further advice.

Concerned that seven out of 10 adults do not participate in further education or training in Britain, the MSC has already conducted a small pilot study, with companies using computer facilities to obtain training advice.

Now the commission intends to launch a major feasibility study which, over the course of a year, will examine whether a system could be established nationally, and at what cost.

Science saviours open office

More than 2,000 scientists have joined the campaign to "save British science", prompting the organizers to set up a professional scientific institutions.

The campaign's national office, which has far exceeded the expectations of the organizers, is now being set up at the University of London. The campaign's national office, which has far exceeded the expectations of the organizers, is now being set up at the University of London.

Professor Lamb said the campaign had already received many letters from senior and junior members of the scientific community detailing the damage being caused by research funding cuts.

These will be passed on to the House of Lords Select Committee on Science and Technology, as well as members of group and the Department of Education and Science.

The Secretary of State for Education, Sir Keith Joseph, has already welcomed the SBS campaign.

More cash for adults

MPs have called for the Government to provide the Manpower Services Commission with an additional £25 million a year for adult training.

The recommendation comes in the second report of the House of Commons Employment Committee published last week. It deals with the MSC Corporate Plan for 1986/9.

The report says that adult training was not progressing as fast as that of young people. Moreover in the Youth Training Scheme around £1.1 million was being spent on 450,000 youngsters, yet only a quarter of that amount — £260 million — was available for half that number of adults.

"MSC witnesses admitted to being strapped for cash" and said to fully properly their present commitments they would need a minimum of £20-£25 million. We recommend that this money should be made available," the report says.

The committee has also recommended that the possibility of a levy/grant system to encourage training by employers should be seriously examined as part of a current study on the funding of vocational education and training.

It says that exhortation alone is not sufficient considering 30 per cent of employers deliver inadequate training and generally spend only 0.11 per cent of their turnover in this area, comparing badly with the annual £100 million spent by the UK's competitors.

"MSC witnesses said that as long as employers take only a short-term view about problems of 'this afternoon' and the 'cashflow of the next month', skill shortages occur."

Plea for action on 'harassment'

Allegations that Manchester University students were victims of police harassment following the visit of then Home Secretary, Mr Leon Robinson, are to be raised at the university's senate next month.

Three senior teaching staff have indicated that they will call on the chancellor, Professor Mark Rickman, to take up the allegations with the Home Secretary, Mr Douglas Hurd.

The demand, by Professors Trevor Ranger, Bryan Roberts and Tony Shanin, follows a call from the university's senate for a full investigation. They believe that disclosure to the *Guardian* newspaper and to the police for an inquiry into police activities



Standard reply to validation

There are a number of logical positions on the validation of degree courses in Britain. And the DES response to the Lindop report is none of them.

The National Union of Students, for example, takes the view that all degree courses should be externally validated and that only qualifications which are so validated should be allowed to carry the title "degree".

The chairman of the NAB board is on record as wishing to see external validation extended even to the venerable university establishment of which he is warden, while the CNA has offered to undertake for the DES a national validation function.

The concept of universal external validation is logically consistent. It might be costly and it would certainly distinguish British degrees from those of all our major competitors, but it would give uniformity to qualifications and it would be defensible. Indeed, the NUS has claimed that some of the most prestigious degrees on offer depend more on the age and wealth of the institutions and on the consequent quality of the entrants than they do on the delivery of the courses.

Anyone, though, who believes that the Government, any government, would ever be able to impose external validation on British universities has to be gifted with an extraordinary credulity. The sole effect of that credulity is to distort the debate and give success to those who would hedge, and have hedged, the decision.

The chairman of the British Council, an impartial body with the job of selling British abroad, has written to the Secretary of State to urge him to understand the impossibility of expanding to potential overseas students and customers our illogical system of degree provision.

"Standards" mean nothing for employers or parents or students if the system which is supposed to secure those standards cannot be understood or believed.

By mistaking the opportunity to grant degree awarding powers to polytechnics more experienced in teaching degrees, larger and more mature than the newcomer universities, the DES has shown a lack of trust in institutions, in local education authorities and in the public education system.

There has, of course, been a lot of pressure on the DES: some of those who see external validation as the key to maintaining local authority and political control, some from further education lecturers who need polytechnics as their benefactors in salary negotiations and some from universities who see the public sector as the pedestal on which they stand. The DES has listened most carefully to those directors of polytechnics whose background and location incline them to vocalize support for the education authorities.

The DES has been lobbied by those who think they see external validation of polytechnics and major colleges as a lever to get the same for universities.

The result is greater uncertainty than before and a lost opportunity. Once again, it is the students and the nation who have lost out in the power struggle which is the lot of the British education service.

To misquote Blaise Pascal, "The DES has reasons that reason knows nothing of." We may surmise the reasons but we see clearly the results.

B. E. Davison

The author is national secretary of the Association of Polytechnic Teachers.

'Judge and jury' supervisor blamed

by Felicity Jones

A London University MA student submitted his thesis a year early on the advice of his supervisor and was failed by an examination board chaired by the same supervisor, an appeal hearing heard last week.

Mr Barry Adams, an SSRC-funded student in the sociology of education at the Institute of Education, appealed to the judicial committee of the Privy Council in its capacity as visitor to London University that his complaints had not been fairly and openly heard by the university.

The three members of the hearing were Lord Mackay of Clashfern, Sir Patrick Nairne and Mr Mark Carlisle. Mr Adams told the hearing that he had been a well-qualified student. "I have no sense of inadequacy and had wanted to go on to study for a PhD which I was unable to pursue because of the decision."

"There are facts which had I been given a fair hearing would have pointed to mitigating circumstances and had the examiners been made aware of them," he said.

He maintained that he was not properly kept informed of his progress and submitted his thesis a year earlier than he needed to. "My supervisor having approved the submission then played an important part as chairman of the examiners in failing me and taking the appeal which was in effect a complaint against himself," he said.

Mr Adams argued that in the case of borderline exam failures the university should hold oral examinations as at most other universities.

He said that there was something wrong when two out of three SSRC-funded students failed as happened that year. "I'm surprised that the SSRC have not initiated an inquiry because they spent a lot of money on us."

"I gave up teaching to study for my MA and had undergone three interviews for headships to find that I was being taught by people with less experience than what I had trained many years ago."

Mr Adams said that London University had consistently failed to

answer questions about its procedures in the handling of his case and had been unable to discover how or who had considered it.

Many universities including Oxford and Cambridge have formal appeal procedures but London only considers appeals from research students.

He said that London was not in the process of establishing review procedures for MA students but a personal letter to Mr Adams from Professor Philip Reynolds, chairman of the Committee of Vice Chancellors and Principals academic standards group investigating appeal procedures said: "Our inquiries suggest that review procedures for undergraduates and MA students are either established or in course of being established."

In evidence he also cited the government Green Paper on higher education which says that it is important for universities to be seen to take complaints from students, staff and the public seriously.

London University denied any unfairness in the way in which the complaint had been dealt. The university's counsel said that Mr Adams had failed to satisfy three elements of the exam and had been informed that he could rest the next year.

Some confusion did arise when he was led to believe that he could just resubmit his thesis but was later informed by the assistant registrar that this was not possible and Mr Adams decided against resubmitting the whole exam.

"In my view he was dealt with properly according to the university's procedures and was kept informed of its actions by Professor Bernstein," said the counsel.

The university took a decision in 1972 that there should be an appeals procedure in the case of research students but that this should not apply to taught masters degrees.

The academic registrar had decided that no irregularities had taken place which would have enabled the case to be referred to the academic council. The hearing retired to consider its decision.

Scottish intakes 'still not enough'

by Olga Wojtas

Scottish Correspondent

The Government's revised intakes for the Scottish colleges of education next session show a slight increase on their initial proposals, but still fall far short of the recommendations by the General Teaching Council for Scotland.

At the end of last year, the Scottish Education Department proposed a drop in the intake to secondary courses from 570 this session to 530 in September. The SED has now revised this to an intake of 600, although the GTC recommended a minimum of 700.

However, the SED has said this intake may be exceeded to admit additional students in mathematics, physics and business studies. The colleges have been asked to give priority to students wishing to train in these subjects, and in religious education, computing and chemistry.

But the SED has made no change to

its initially proposed intakes to primary courses of 900; 600 to the primary BEd degree and 300 to the one-year primary postgraduate course.

The postgraduate intake has been increased by 50 per cent from the 200 places available this session, but the GTC recommended an increase to 400, with 700 BEd places.

The SED has also asked the governing bodies of Scotland's seven education colleges to comment on its proposed quotas for each college.

The Secretary of State for Scotland, Mr Malcolm Rifkind, has said these proposals "are without prejudice to any decisions about the structure of the college of education sector" which may be taken after consultation on the Scottish Tertiary Education Advisory Council's report.

STEAC has recommended that the number of education colleges should be cut from seven to four as soon as

possible, retaining St Andrew's, Scotland's only Roman Catholic college of education, and three non-denominational institutions.

At present, the two largest colleges of education are Jordanhill in Glasgow and Moray House in Edinburgh, which the SED proposes should continue to have the largest intakes.

Jordanhill has the highest proposed secondary intake of 250, while Moray House has 95. Dunfermline College of Physical Education, which has no primary intake, has the lowest proposed secondary intake of 40.

Jordanhill also has the highest primary intake of 225, while Moray House has 188.

Dundee College of Education has the lowest primary intake of 80, but also has a secondary intake of 35.

Craigie College of Education, which has no secondary intake, has a primary intake of 100.

Council drops SA invitation

by David Jobbins

College lecturers in Liverpool are still waiting for a 2 per cent pay rise four months after it was due and many part-timers are claimed to be suffering financial hardship because of industrial action by white collar staff.

A dispute in the city council treasurer's department has blocked payments of overtime, back pay, the 2 per cent rise payable from December and incremental credits.

Although the dispute, involving members of the National and Local Government Officers Association, is now over it will be some time before a large backlog of payroll work can be shifted.

Now the lecturers' union, the National Association of Teachers in Further and Higher Education, which has taken legal advice on behalf of its members in the city, is demanding



Master footballer ...

Iraqi physical education lecturer Araz Ali will be over the moon this July when he is awarded an MSC from St Andrews University for his work on "Statistical Analysis of Tactical Movement Patterns in Association Football".

Araz had studied Scottish football from Iraq and came to St Andrews to carry out research on Dundee United, supervised by St Andrews director of physical education, Mr Archie Strachan.

He followed all the home games for the 1984-85 season and studied the team's tactics, with final results

revealing the relative success of various movement patterns in terms of goals and kicking opportunities.

United manager Mr Jim McLean said Araz's findings showed the particular movements the team had concentrated its efforts on were in fact the most successful.

Araz himself has played for St Andrews first team for two years and gained a certificate for a Scottish Football Association coaching course held in Dundee last year. He hopes to continue his studies in Scottish football with a PhD on the physiological demands in association football.

The classic approach to computing

The Queen's University Belfast classics department is enjoying new status as computer firm look with unprecedented favour on graduates in Latin and Greek.

Not only has Queen's a monopoly in classics in Ulster, but it ranks as one of the few red brick universities in the UK to have all three chairs, Latin, Greek and ancient history, occupied.

During the last 20 years it has seen successive chairs of Greek abolished. But Northern Ireland's selective system has enabled classics to retain its traditional niche, with the teachers, both at university and in schools, banded to a Joint Association of Classical Teachers, committed to encouraging interest at all levels. A pre-O level conference at Queen's this year attracted 400 fifth formers and a further 100 A level students turned out for a sixth form conference.

Enthusiasm for the discipline is likely to increase since the careers office at Queen's reports a highly favourable reaction by computer firms towards classics graduates. One student who wrote an MA thesis on "Latin poets in the reign of the Emperor Augustus" found himself in brisk demand by computer firms, who also selected, from an assortment of disciplines on offer, a graduate in Latin and Italian.

John McEann, professor of Latin at Queen's, said: "Employers see those who can handle Latin and Greek as capable of handling anything. It gives them mental agility and should foster ability to take up new activities in a world where people are going to have to change their occupation several times in the course of their working life. And as society becomes more scientific, it will prove useful in enabling people to make a stab at the meaning of specialist terminology."

His regional official, Mr Peter Venn, said: "We have put in a claim for our members to be compensated and that the payment must be made immediately."

"We are considering what action should be taken to back this up. We think that some of our members are owed over £1,000."

He said that among Nafthe members who had particular difficulties were one parent families, part-timers with substantial hours reliant on the work for their main source of income, and staff hired on temporary contract to cover for secondments and maternity leave who were receiving nothing until the union intervened.

Nafthe has cooperated in dealing with individual hardship cases but routine cases will take some time to tackle.

Karen Gold reports from the British Sociological Association annual conference

Sociology's humane crusade

Sociology could lead the return to the concept of a humane rather than narrow form of higher education by re-examining the purpose of its undergraduate curriculum, Professor Martin Albrow, professor of social theory at University College, Cardiff, told the annual conference of the British Sociological Association.

Between 1,000 and 2,000 students would graduate in single honours sociology this year, up to 10 times as many as were necessary simply to train sociologists for professional posts and sustaining the subject, he said.

To keep sociology going would need only around six academic departments with about 10 staff each. Yet there were 82 degree courses in sociology in existence even though fewer than 2 per cent of all graduates were sociologists.

Carry on training, says code

by Peter Aspin

All university lecturers should spend some time each year on training and development activities, urges a new code of practice on staff training issued by vice chancellors.

The code emphasizes the responsibility which rests on individual lecturers to fulfil their training commitments. Activities might include identification of personal strengths and weaknesses in teaching, research and administration or management, exploration of ways in which competence can be improved and attendance at courses and workshops.

All universities should set up academic staff training committees, and provide a programme of courses and events, including induction for new staff, initial training for less experienced lecturers and workshops and seminars for other staff.

The code urges departments as well as institutions to play their role in training by providing systematic on-the-job training for their academic staff through seminars, discussions and job rotations.

But the new guidelines, prepared by the Committee of Vice-Chancellors and Principals, do not commit themselves to any timetable which should be set aside for training purposes.

"The time given to training activities will depend upon individual circumstances and changing patterns of departmental activity," it says.

The CVCP's own training committee, in a survey carried out in 1985, recommended that newly appointed staff spend at least 15 days on training in a three-year cycle, experienced staff nine days and heads of departments seven days.

The CVCP, which largely reflects existing practices in most universities, adds that many informal interest groups have been set up which meet regularly within departments or faculties.

Well, now we know. The Government's strategy is clear. It was as simple as that. After the press leaks telling us that Norman Tebbit and Mrs Thatcher were going to be the sole authors of the next manifesto, and that items like education vouchers were back on the agenda, we should have known there was going to be no change in that direction. If your Cabinet becomes a bit too damp at the edges, ignore it. Cut it out of the decision-making process.

Not that the chancellor comes into that damp category, of course. Indeed, it is often forgotten that he, along with Mr Tebbit, was one of the notorious "Gang of Four" that preceded the SDP's collective quartet and used to advise Mrs Thatcher on tactics for Prime Minister's Questions, and other matters when she was Leader of the Opposition.

So it is not surprising that the Budget reflected the Thatcher/Tebbit strategy for the election. As I said in my last column the week before the budget: "The Chancellor has to choose between income tax hikes and placating the widespread anxiety about unemployment and its

The scale of academic sociology provision showed that sociology's base was in education, and that government support for a subject was not necessarily reflected in the number of courses in it.

Demography, which had the enthusiastic support of government and research councils, had only one undergraduate degree course compared with sociology's 82. "There's no reason at all to think if a discipline is supported by the Government for statecraft that it will thereby gain recognition from the Government in the academic world," he said.

But sociologists could not argue the case for their subject as a broad education without examining the curriculum they taught and justifying it, he said. Parts of the sociology curriculum

prepared students in scholarship, logic, computing, communication skills, understanding texts and people.

"The message I want to put over is that sociology as a discipline has a content which provides a very suitable vehicle for the development of a diversity of skills, so that the claims for our own courses are not overstated."

"There's every reason to believe that in the current climate where the vocational and narrowest possible interpretation is being put on education, that sociology has a leading role to play in stating the humane concept of higher education."

The mood of sociologists was changing and they were tending to give constructive rather than negative answers to questions.

Urgent action needed to solve youth crisis

British sociology is currently failing to help understand and solve the contemporary crisis among young people, according to Professor David Marsland of Brunel University.

Young people were suffering unemployment and inadequate education, were involved in delinquency and delinquent behaviour; "Young people constitute, or rather are constituted into, one of the major social problems facing contemporary Britain. Radical practical action is urgently needed to answer it."

Sociologists have either neglected the topic of youth or misinterpreted it, Professor Marsland told the meeting. The sociology of youth is taught in few courses outside professional youth work training, and included as a separate subject in few textbooks.

What analysis there is of the lives of young people is dominated by Marxist assumptions, perspectives, and frameworks. Marxist sociologists have rejected psychological theories of adolescence and sociological analyses of young people as a distinctive group, arguing that common aspects in young

people's lives are overwhelmed by standard class distinctions between them.

Six fundamental themes should be considered in the development of a sociology of youth, Professor Marsland proposed:

- Youth culture as a unitary concept, potentially available to all young people.
- The values, beliefs and norms of youth culture as part of an overall age system in society of which class forces were only one factor.
- Youth culture as rebellious opposition and innovation in the face of adult control generally.
- Such rebellion escalated and exaggerated in postwar liberal-democratic societies.
- National, international and global patterns of youth culture.
- Youth subcultures.

It was not enough for those non-Marxist sociologists of youth to offer merely descriptive accounts of young people disconnected from theory. "As if young people were exotic animals in a global wild-life park," he said.

Private agencies anger Scottish unions

by Olga Wojtas
Scottish Correspondent

Scotland's further education unions are battling their members on industrial action following the Scottish Vocational Education Council's decision to allow two private agencies to offer courses leading to the new National Certificate.

There was a stormy meeting last week before Scotvec and the Educational Institute of Scotland and Scottish Further and Higher Education Association, with the FIS criticizing Scotvec chairman Dr Peter Clarke as "condescending and provocative."

There has been disagreement be-

tween the unions and Scotvec over offering National Certificate modules in private agencies. The unions claim there is an agreed two-year moratorium on privatization, which does not expire until September.

However, Scotvec claims the agreement was that it should concentrate for the first two years on the public sector, and would not offer courses to private agencies without consulting the unions.

But the unions deny that there has been consultation, and say they were simply informed that Scotvec had taken a decision on privatization.

Mr Jack Dale, further and higher education officer of the FIS, said the

unions and Scotvec clearly took different views of the moratorium. "But Scotvec just weren't interested in getting into constructive discussions."

The two unions have instructed lecturers to cease further voluntary work for Scotvec and will meet next week to discuss prospective joint action.

"It's difficult to see how Scotvec can continue to operate in any serious way without the co-operation of the lecturers," Mr Dale warned.

Scotvec has confirmed that it will not reconsider its decision on the two agencies approved so far, and has revealed that it has received more than 60 other applications for approval.

Hattersley moves any further to the right in his present phase he may as well join the Tory Party. How do we reconcile his present position with the sort of interview he gave to *Marxism Today* a short while ago. His pronouncements are totally inconsistent. His figures don't add up. In short, he is talking a great deal of humbug in a vain and desperate attempt to attract votes that are flowing to the Alliance.

He stands little chance of capturing any such votes. Only by divesting himself of the left and the trade unions will he be able to do so. He will have no party left if he tries to do that. And, anyway, I suspect they are more likely to get him before he succeeds in bouncing them further to the right.

That ground has already been occupied with increasing success by the Alliance and if people want to move on to it they are surely more likely to go for the genuine article than a very dubious substitute.

Ian Wrigglesworth
The author is Social Democrat MP for Stockton South.

Champion of the underdog

by David Jobbins

Man's exploitation of animals is charged with high emotion and strong opinions which get in the way of reform. Views are polarised and the opposing factions are strong on conflict and weak on common ground which could produce tangible improvements for animals on farms, in zoos and in laboratories.

Dr Donald Broom, whose appointment to the world's first chair in animal welfare was announced this week, has his own very firm views which place him squarely in the animal rights camp. But his academic brief will be the search for ways of making animals' lives less fraught. And this needs the cooperation and respect of the exploiters as well as the welfare activists.

The chair, attached to Cambridge University's veterinary school, is funded by the Animal Welfare Foundation, an organization with its roots firmly in the British Veterinary Association. The peak of the AWP's first initiative, it is intended as the plank for detailed research and evaluation of practical answers.

Activists are wary of the BVA's gradualist approach and are increasingly turning to militancy in their campaigns against factory farming and use of animals in laboratories.

But Dr Broom believes that a foot in both camps does not mean sitting on the fence, and his comments on animal husbandry and other emotive issues are invariably prefaced with a conditional "if we are to keep animals on farms/in zoos/laboratories..."

"My principle job is to assess the

welfare of the animals. The general moral questions of whether animals should be kept in zoos or laboratories is an area on which I have opinions but it is not my principle task."

His view is that there are too many zoos, but that the maintenance collections is of considerable educational value as well as a tool of conservation. He also believes there may be too many laboratory animals and that alternatives need to be found.

But the function of the chair is to offer unbiased, scientifically-based practical opinions on welfare matters rather than to achieve radical change.

"I would like to promote a dialogue between people who are concerned with animals either through exploiting them or because they want to improve their welfare. I certainly count myself among those who want to improve animals' welfare, but I accept it cannot be achieved overnight."

The first step will be to draw up indicators of welfare which can be applied either by the state veterinary service or veterinary surgeons in private practice who may be asked to comment upon particular circumstances - animal housing for example.

Dr Broom will be returning to Cambridge, where he read natural sciences, graduating in 1984. Now a reader, he has been involved in studies on stress, welfare and frustration in farm animals, recently extending his research to zoo animals in collaboration with the Royal Zoological Society.

New A level grade announced

A new A level grading system designed to make the awards of grades fairer is to be introduced by the Government from next summer.

At present only a few marks separate the D, C and B grades. The Government plans, the mark range between the bottom of the B grade and the bottom of the E grade will be divided into three equal intervals assigned to grades C, D and E.

The Government has also decided to replace the O level grade awarded to those who have just failed their A levels. A new N, for narrow fail, will show prospective employers that the student came close to making the grade.

And the new minister for national education, Mr René Morony, has

Staff want autonomy restored

by Geoffrey Parkins

The Malaysian education ministry in Kuala Lumpur is going ahead with its plan to set up a new Universities Council among other things to control academic standards, promotions and terms of service for academic staff in the country's six national universities.

The council will be based on recommendations put forward by vice chancellors last year, although details are being kept secret and, according to senior academics, are being implemented in a confused "bits and pieces" fashion.

University academic staff associations have cold-shouldered the government's plan and joined local universities in calling for a complete review of the Universities and University Colleges Act (1975), that would restore autonomy and academic freedom to all the country's universities.

Education minister Datuk Abdullah Ahmad Badawi has agreed to study the Act "very carefully to make sure it does not inhibit the healthy pursuit of academic activities". Given the government's reluctance to comment and the number of conflicting reports circulating in the media and education circles, the universities are in as much confusion as ever.

The only thing which does seem certain is that the government has no intention of relaxing the east-iron grip it has held on higher education since it clamped down 11 years ago.

The 1975 amendments to the Universities Act - which were introduced when Prime Minister Datuk Seri Dr Mahatir Mohamad was education

minister - are described by the academic staff associations as the "most obnoxious piece of legislation ever to pass through the doors of parliament."

The academics say it removed academic freedom and placed the running of the universities, including decision making on academic and administrative matters and appointments, in the hands of civil servants.

Association leaders, including Datuk Dr Mokhzani Abdul Rahmani, former deputy vice chancellor of the University of Malaya, say the 1975 legislation was nothing more than a "weapon to punish" the universities, particularly the local universities, and their teaching staff. The Act destroyed the autonomy of universities and effectively turned them into government departments, eliminating free and open debate and alternative points of view, and imposing wide-ranging restrictions on students and staff.

Lecturers are very tightly controlled, their every movement monitored by the government's men, and in many cases are treated like students rather than responsible intellectuals. And resentment among teaching staff and students is mounting.

Making matters worse, said Dr Rahmani, were the vice chancellors and council members who instead of working in the interests of their universities, staff and students, had over the last 11 years been acting as "policemen" for the government. It had deteriorated into an "us versus them" situation. University administration had become a "political, social and ethnic" battleground.

The Joint Council of Academic Staff Associations, in a memorandum to the education minister, has recommended 15 amendments to the Universities and University Colleges Act, that would among other things:

- Restore academic freedom and a certain amount of autonomy to the universities.
- Relax the political and religious restrictions on both academic staff and students.
- Alter the provisions pertaining to disciplinary action against staff and students, including the appointment of high court judges to replace vice chancellors on the disciplinary boards of universities.
- Give union status to the JCAAS and union representation to all academic staff.

The staff associations feel that the granting of union status to its joint council and union representation to all academic staff is a crucial factor, as it would provide academics with the opportunity of negotiating for better terms of service and other changes, and help prevent abuse of administrative powers.

The government is in a very difficult position. For there is a genuine fear among ministers that if it does loosen its grip on the universities, political and religious extremists will get out of control, particularly among Malay Muslim fundamentalists. But if it does not, resentment will continue to grow at a time when the UMNO dominated government faces its most serious crisis in 17 years, with the collapse of the economy and the imminent election this has precipitated.

Wider role urged for grandes écoles

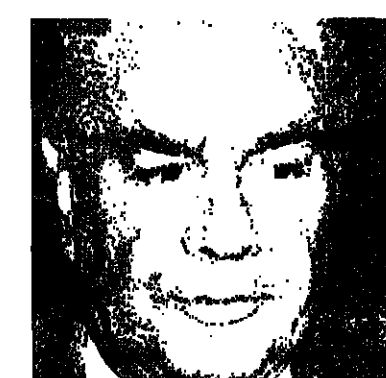
from David Dickson

The French government has been asked to make a major effort to increase the recruitment of students into the *grandes écoles*. These include the creation of new scholarships designed to attract women into technical subjects, the setting up of new institutions in fields such as new materials, biotechnology and journalism, and the introduction in universities of special classes for those who wish to transfer to a *grande école*.

These proposals are made in a report prepared by the director of the *école normale supérieure* at Sevres, Mme Josiane Serre, for the former minister of national education, M. Jean-Pierre Chevènement, and presented to him only a few days before last month's parliamentary elections.

However, her conclusions are not likely to be entirely shelved by the coalition of conservative parties which won a majority in the elections, partly because they endorse several trends already being encouraged by the *grandes écoles* themselves, and partly because the new government is itself anxious to find ways of increasing the effectiveness of the higher education system.

And the new minister for national education, M René Morony, has



New minister: René Morony

already said that he supports his predecessor's desire to double the number of high school students taking the baccalauréat by the end of the century. One of the main reasons for seeking an expanded intake by the *grandes écoles*, speaking to journalists shortly after taking over his new position, M Morony said: "Far from criticizing this policy, I want to expand it, since demography does not wait, and neither does international competition."

Mme Serre was asked specifically by M Chevènement to suggest what steps could be taken to double the intake of students into the *grandes écoles* over

the next 10 years, and how the entrance requirements could be broadened to encourage the recruitment of students with a wider range of academic abilities.

On the first of these, she suggested that, rather than aiming for a massive expansion of current institutions, a range of new ones should be created, particularly in fields of new technology which are inadequately covered at present. These include computer sciences, energy technologies, telecommunications and biotechnology.

In non-technical subjects, she also proposed the creation of a new *grande école* specializing in journalism and another institute focusing its courses on the natural environment, as well as a number of new management schools in provincial regions where they do not currently exist.

Mme Serre pointed out that there was a major need to increase the recruitment of women, who currently make up only 18 per cent of those attending the high-school preparatory classes for the *grandes écoles* in scientific subjects. A new set of scholarships - similar to that introduced for women taking university science courses - should be complemented by a publicity campaign showing that women were capable of succeeding in technical subjects. DEUG.

Irony support for Poland's democratic voice

The voice of Poland's academic community should be heard in discussions about the country's new development strategy, higher education minister Dr Benon Miskiewicz told a meeting of university rectors and first secretaries of university party committees.

His statement, and indeed, the venue of the meeting, were ironies. For Miskiewicz has effectively ensured that the universities no longer have any independent official voice, first by dismissing almost 80 democratically elected rectors, deans and heads of faculty councils, and then by attacking the Main Council for Higher Education, which is supposed to represent the higher education community in all dealings with the government.

Miskiewicz, moreover, was speaking in the hall which, last November, was the scene of one of the largest demonstrations against the dismissals - the great hall of Warsaw Polytechnic University.

The dismissals at the end of November attracted wide publicity. The attack on the main council, however, was less obvious. Miskiewicz had

already tried to destroy it once, when he realized, in the winter of 1984/85, that it would be the focus of protests against his proposed reform of the higher education Act.

But under renewed pressure from academics and other groups, he climbed down at the last minute and allowed the main council to continue as an elected body, albeit shorn of virtually all power.

Miskiewicz, however, still had one trump card. Under the amended higher education Act, he had the right of veto over the election of delegates to the main council. The outgoing council's term of office came to an end on November 30, just as the dismissals of the rectors and deans were taking place.

During the next 10 weeks, as the various universities and colleges elected their new delegates to the council, they were subjected to a constant campaign of advice, discussions, persuasion and downright pressure, to elect people who would be sufficiently compliant to ministerial directives. The new council began

functioning in March, but a number of eminent names were missing.

Whether their absence was due to official pressure or their own reluctance to continue to serve in a body which had been deprived of the power to carry out its prime function, is not, in every case, clear. But in one case, the city of Wrocław, it is known that there was direct interference from Miskiewicz.

Addressing the same meeting as the minister, the party central committee secretary with special responsibility for educational matters, Tadeusz Porębski, was at least unambiguous. The universities, he said, need more discipline and "iron consistency" in turning out graduates who will be "good citizens of the socialist state".

Polish TV is planning a "documentary" on the death of Marcin Antonowicz, the Gdansk student who died last November after "falling out of a police van". His parents and public opinion generally will not accept the official verdict that the death was accidental, particularly as it happened on the anniversary of the murder of Solidarity priest Fr. Jerzy Popieluszko.

The face from the Turin shroud

New light is cast on Turin shroud

from William Norris

WASHINGTON

New evidence to support the authenticity of the Turin shroud has been produced by Dr Alan Whanger, a psychiatry professor at Duke University, North Carolina, who has used a polarized image overlay technique, which he developed in 1981, Dr Whanger has been comparing the facial image on the shroud with the carved relief of Zeus Kyrios, discovered by archaeologists in an ancient temple beside the Euphrates in 1932.

Working with his wife, Mary, Dr Whanger found 79 points of congruence between the shroud and the carving. "In a court of law," he said, "45 to 60 points of congruence are sufficient to establish the identity of face images."

"Thus there is excellent evidence that the facial image of Zeus Kyrios was based on that of the shroud of Turin. This would give obvious support to the fact that the face on the shroud was available, either directly or through excellent detailed copies, to the artist carving the relief."

The significance of this similarity lies in the fact that the Zeus Kyrios relief is firmly dated by its own inscription to AD 31 - 12 months after the widely accepted date of the Crucifixion. If Dr Whanger is right, and it was copied from the shroud, claims that the controversial cloth is

in addition to his study of the Zeus Kyrios relief, Dr Whanger has examined numerous depictions found in a Jewish synagogue at Dura-Europos. These, too, he claims, appear to be based on the shroud image.

He also studied the earliest portraits depicting Rhudra in human form, from India in the first and second centuries. These show not the familiar obse oriental figure, but a semitic man bearing a close resemblance to the image of the shroud.

"I think these findings indicate that the facial image on the shroud, was well known to people and was an image that affected people's ideas about the deity. The wide use of the image as a model to portray god-like figures would indicate that the image was felt to have enormous power or was divine."

overseas news

EEC takes first step to pump up industry

by Thomas Land

Innovations in electronics and biotechnology lie at the heart of proposals for a major new European Community programme intended to revitalize the sluggish manufacturing sector by promoting co-operation between business and universities.

In the long term, the European Commission, the administrative secretariat of the community here in Brussels, hopes to make the stimulation of the new technologies the very centre of its industrial strategy. To achieve that, it envisages an increase from 3 to 8 per cent in the community budget to finance training and research.

As a first step, the community has just launched an action programme on technological education. It emphasizes collaboration between industry and the universities in training, the international exchange of students, teachers

and businessmen, joint projects for training in new technologies involving business in more than one member state and the use of audiovisual and computer techniques for teaching at home.

In a discussion paper recently placed before the community's heads of government, the commission argues with force that the collective competitiveness of their countries has been weakened by the slow introduction of new technologies in production processes. Yet information technology alone is expected to create four million new jobs during this decade and influence perhaps half the existing jobs. The community now imports 75 per cent of its supply of video recorders and 80 per cent of its microcomputers.

"Co-operation has already borne fruit in many areas where it has enabled a powerful European presence to be established," says a specialist spokesman for the commission.

"Examples include the Airbus and Ariane in the aerospace sector and JET in the thermonuclear fusion sector. Many new initiatives are on the way to extend joint activity into new areas."

"The objective is to stimulate co-operation between business, laboratories and the universities throughout Europe in the development of new technologies and new products fulfilling existing or potential market needs."

"It is not a matter of basic research but of joint action in the pre-competitive stage of technological development. It will be up to business to take over at the production and marketing stage."

These are some recent collaborative initiatives which are likely to benefit from the proposed investment policy: *The European Strategic Programme for Information Technologies*, a five-year scheme to help the community to respond to the challenge of American

and Japanese competition in information technology. Its framework already provides community finance for up to half the cost of pre-competitive research and development involving business and the universities. Areas covered include advanced micro-electronics in high-integration circuits, software techniques, advanced information processing, the computerization of offices and computer-controlled production techniques.

Research and Development in Advanced Communications Technologies for Europe, now in its initial "definition" stage, is intended to keep Europe in the forefront of telecommunication developments. Its principal objective is the production of the technology needed for a wide band of high-performance fibre optic networks capable of transmitting sound, picture and computerized information simultaneously. The programme will initially aim to establish a common reference

model and to define specifications, the functions of the network, services which might be provided by 1995.

Basic Research in Industrial Technologies for Europe, the programme is aimed at encouraging development and spread of new technologies, new processes of manufacture and new products in the "frontier" sectors which still account three-quarters of industrial output.

The Biotechnology Programme, a key development project designed to stimulate training and research, covers areas as bio-informatics, the collection of biotic materials, the basic technology of enzyme and genetic engineering, the technology of cells and culture, toxicology and other risks. The programme is to be complemented by a system of aid for innovative industrial projects.

Student riot forces university closure

from Wachira Kigotho

NAIROBI Konyatta University has been closed indefinitely after two weeks of students' picketing and boycotting of lectures. The crisis culminated in the destruction of the university chapel late this week. During the rioting several students who were inside the chapel were injured when their rioting colleagues hurled rocks and stones through the chapel windows.

Refusal to attend lectures started on February 28 when the students wanted to have an audience with the minister of education, science and technology, Professor Jonathan Ng'eno, to iron out some of the students' grievances. One of the major grievances was that BEd graduates were not being regarded as professionals by a government appointed commission charged with the duty of revising the civil servants' salaries and other terms of service.

The popular "Ramtu commission" increased the salaries of engineers, architects and others, but anger grew when graduate teachers were not awarded new grades. The students at Konyatta University were demanding that the government raise their grades to be on a par with other professional personnel.

After meeting the minister at the university, the students agreed to hold more talks at the ministry's headquarters. Despite constant appeals for them to resume classes awaiting the outcome of the talks, many students moved out of the campus and blocked the main highway to central Kenya. A bonfire was made and motorists who attempted to pass were pelted with stones.

Violent clashes between police and university students are not new in Kenyan universities. Last time such

clashes occurred in Nairobi University, one student died, others were injured including policemen.

A radio broadcast announcement from the permanent secretary in the ministry of education, Mr D. Mwiraria, urging the students to resume classes, went unheeded. Mr Mwiraria told the students that the grievances that they had were "completely external to their welfare at the university". He said that those who refuse to attend classes will be regarded as having withdrawn from the university and must therefore leave the campus.

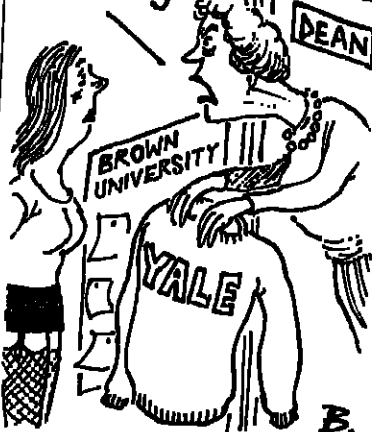
The university was eventually closed and the police arrested students who refused to abide by the government statement to return to classes. No charges so far have been preferred on them.

President Daniel Arap Moi told the university administrators that they should not drag the government into such student issues as they had the machinery to classify the students. He said that the law empowered universities in the country to cope with their problems.

Nevertheless Mr Moi castigated the Konyatta University students for boycotting lectures. He described them as ungrateful to the nation and taxpayers paying for their education. Mr Moi emphasized that the government will be reviewing salaries and terms of service of its employees but could not be intimidated or coerced by a few misguided persons.

The giant Kenya National Union of Teachers also criticized the students. The general secretary Mr Ambrose Adongo said that it was difficult for high school teachers to climb up the scheme of service compared with other professions.

If you must do it, at least dress sensibly...



Scandal of Ivy League hookers

Brown University in Providence, Rhode Island, is an Ivy League college. Its students, as Miss Jean Brodie would say, are the *crème de la crème*. Unfortunately, it turns out that some of them are also hookers.

The news that two senior students were arrested last week on charges of soliciting for prostitution, came as a nasty shock to the politicians and celebrities who have been sending their sons and daughters to Brown in increasing numbers in recent years. It did not seem to indicate the sort of men they were entitled to expect when paying annual tuition and fees running as high as \$15,000.

The affair came to light after police inspector Malcolm Brown had approached the girls, posing as a "businessman in town looking for entertainment". A raid swiftly followed on a converted carriage house in a fashionable area near the campus, where photographs of 46 ladies in various states of undress were discovered. Six of the students were identified as Brown University students.

For the authorities at Brown, the delight with which the media has pounced on their little scandal seems very unfair. It was they, after all, who started the whole thing when they passed on to the police a complaint by a student that she was being coerced into prostitution.

Robert Reichley, Brown's vice president for university relations, has complained of "a gang rape by the media". Headlines calling Brown to a "hooker probe" and a "prostitution ring" have not amused Mr Reichley.

Yet the 222-year-old college, seventh oldest in America, has survived worse incidents in its recent past. In 1984 a campus referendum called on the university to stockpile nuclear pills in case of nuclear war. It will probably survive this one.

Intellectuals rejoice at writer's renaissance

by Geoffrey Parkins

Yu Pingbo, considered by many to be one of China's best classical scholars this century has been officially rehabilitated by the Chinese Academy of Social Sciences in Peking.

In 1954 Yu Pingbo was condemned nationwide by Mao as a "reactionary bourgeois ideologist", who "poisoned young people's minds with false ideology". A vicious political campaign was launched against Yu, which was to have far-reaching implications for all Chinese intellectuals.

Mao's humiliation of Yu triggered a relentless nationwide campaign against writers and academics in the country, large numbers of whom, like Yu Pingbo, were sacked, stripped of their possessions and homes and persecuted for many years. Yu's adversities marked the beginning of the end of literary and academic freedom in China until very recently.

Hu Sheng, president of the Chinese Academy of Social Sciences, said at an official meeting to celebrate Yu Pingbo's academic contribution to Chinese literature, that the 86-year-old scholar was clearly one of China's most outstanding writers and poets this century and was dreadfully and unjustly "wronged" by Mao and the party.

Mao's mistake "had widespread adverse effects on the development of Chinese literature and led to other political upheavals, including high-gear political campaigns to the detriment of free academic discussion and the contention of the hundred schools of thought philosophy".

Yu Pingbo's representative work *Study on Dream of Red Mansions*, which received chief criticism and which brought him so much misfortune, was a work of analytical genius. Hu Sheng - who is writing a history of the Chinese Communist Party - added that Yu's theories were of a "purely academic nature" and the "political suppression against him was totally wrong". The party, said Hu, "should not have passed judgement on such academic activities".

The party's role in literary and academic freedom is a topic receiving considerable attention in China at the moment, and many writers and academics are urging the government to place all cultural and academic purges under the jurisdiction of the law, "instead of the Communist Party's policies". But, while the party recently reiterated its "freedom to write" policy and there are clear signs that its rigid

grip on publications is beginning to loosen, a brief review of recent announcements and moves by the party clearly shows the concept of literary freedom in China differs greatly from that in the west.

For instance, Xu Liyi, chief of the Publications Bureau of the CPC, while rapping the knuckles of publishers recently for allowing too many "unhealthy" books to get on to the market - explained that the concept of literary freedom in a socialist country was and indeed "should be different from that in capitalist societies".

The fundamental task of literature and publishing in socialist China, he said, is to "educate the people and disseminate knowledge helpful to the nation's planned social development. Literary works and other publications should publicize the basic tenets of Marxism, patriotism and socialism, as to arouse the people's enthusiasm for achieving the party's goals".

Chinese academics and writers are clearly in a sticky situation at present, and are fully aware of the existing dichotomy. Wang Meng, executive chairman of the Chinese Writers Association recently remarked at a national conference in Peking, that while writers should bear their social responsibility in mind and Chinese literature should be oriented towards socialist norms, the "freedom to write" is essential to literary growth and writers cannot produce good works simply by responding to administrative orders.

The freedom to write, Wang added, "is a prerequisite to literary creation. Only in a free environment can people express their feelings, display their wisdom and then create different spiritual products with their individual characteristics".

Earlier this month, Tang Dachen, CWA chairman, said 1986 marked the 10th anniversary of the end of the Cultural Revolution (1966-76) and the beginning of what he hoped would prove to be "China's literary renaissance".

Tang said that during the last decade writers had devoted much time to criticizing the Cultural Revolution and representing China's efforts to build itself into a modern world power, but the time had now come to evaluate the experiences of the period and plan for the future. During March and April, he said the association's governing council would meet in Peking to devise a "five-year plan for China's literary development".

Venezuela school shuts down

The British Council has been forced to close one of its two remaining language schools in Venezuela. Eight London-recruited staff will be redeployed or flown home.

The centre, at Ciudad Guayana, is a victim of the deteriorating economic condition of the country and the continuing pressure on the British Council to make cuts. Another school, at Maracaibo, closed last year when its annual deficit topped £100,000.

At Ciudad Guayana, difficulties in

attracting fee-paying students have led to increasing losses. The bill came to £68,000 last year, compared with £37,000 in 1984, and a halt was called.

A council spokesman said last week: "The school is very much a casualty of the harsh economic climate now prevailing in Venezuela and the continuing pressure on the British Council's budget." The council's activities in Venezuela are now restricted to Caracas.



George Walden learns about bread-making in Salford, Essex Institute staff visit Ford in Germany and Imperial College professor Roger Sargent uses IBM technology.

Everyone knows that higher education does not serve the needs of industry. The Government said so in its Green Paper on higher education, leading industrialists say so with monotonous regularity and there is no shortage of academics prepared to admit it themselves. But is it actually true?

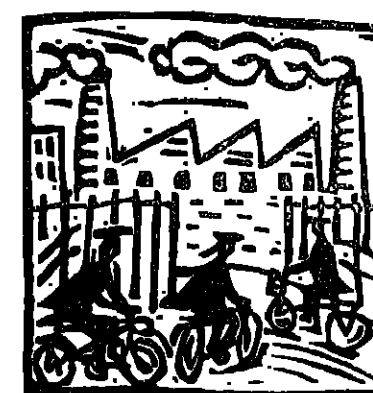
There are few even among higher education's greatest defenders who would claim that all the demands of industry are being met and fewer still who would wish it to change sufficiently to do so. But there is no doubt that the level of contact and collaboration between higher education and industry has been increasing at a rate which would not be suspected from the tone of most public statements.

To a large extent, force of circumstance has dictated that this be so. Universities, polytechnics and colleges have been forced to widen their horizons, faced with an endless squeeze on their budgets, both to bring in extra funds and to carry on the increasingly necessary business of updating of staff. Consultancies, staff exchanges and visiting involvement in course planning have all become increasingly common.

Having put a toe in the water, perhaps reluctantly in many cases, most institutions have now seen the advantages of such collaboration and are doing their best - with varying degrees of effectiveness - to encourage more. No college is complete without its industrial liaison unit; no university wants to be left behind in the science park stakes. And every institution is looking over its shoulder at the planners, anxious not to be penalised for running courses thought to display an ivory tower mentality. Good employment rates for graduates are trumped as never before.

As ever, however, there is little agreement on what precisely is required of higher education. Manpower planning, for example, may make a comeback if the imbalance which has developed in technological fields continues, but for the moment it is out of favour with civil servants and industrialists alike.

The CBI made clear its views in a



submission to the joint meetings of the higher education planning bodies held earlier in the year to discuss future student numbers. It said: "History tells of manpower plans that have foundered in attempting the task, which are as numerous as wrecks on the Goodwin Sands. The reason is not hard to find. The timescale on which higher education operates in planning its undergraduate courses and the output from them is perforce a long one, whereas industry's plans must relate to immediate market needs, fierce competition and the economic climate which can change as quickly and unpredictably as the wind."

One major company which has consistently and carefully carried out manpower planning as part of its normal financial budgeting and personnel routines has found that whereas it can be reasonably effective on a one or two-year timescale, longer forecasts bear little relation to what in fact occurs.

It was far from clear on what actually was required: "The CBI welcomes the shift of emphasis to academic disciplines which would have a science, mathematics and technological base, but would not want the product of these to be too specialised. The specialisation can be added by industry."

The paper went on to admit: "The CBI realises that industry must be more specific in defining its requirements and is encouraging its members to be so. In general the demand is for

Contacts and contracts

GATEWAY TO INDUSTRY I: John O'Leary looks at links being forged

graduates who are able to adopt a broad systems approach to tackling industrial tasks, and initial comments on those emerging from four-year enhanced engineering courses, which set out to cater for this approach, are very encouraging."

In common with other industrial groups when tied down to specifics, the CBI says that employers place more weight on personal qualities than academic background. The ability to communicate, breadth of outlook, leadership potential and a positive attitude to change are the sort of characteristics they list. "Rounded" graduates, at ease with figures and able to function effectively as part of a team, are what is required.

The same message emerged from the National Advisory Body's industry group in its last report. Indeed, so strongly did the members feel about the subject that the NAB intends to publish its findings next month as a pamphlet on the need for more emphasis within higher education on transferable interpersonal skills, which is the jargon for the kind of qualities identified by the CBI. The pamphlet will explain why it is felt that higher education is not successful in these areas and suggest guidelines for improving performance.

The NAB group had already put the cause for greater involvement by employers in higher education, both at the strategic planning level (locally and nationally) and in terms of individual

subjects. Its report last year called for:

- an increase in the number of employer representatives on national and institutional bodies, notably to raise the proportion on polytechnic governing bodies from the normal one third;
- the establishment of national subject task groups, which would be available to work with institutions on specific topics, as an alternative to the time-consuming and sometimes unproductive business of sitting on subject committees;
- adequate employer representation on validators' visiting parties;
- and more continuous contact between higher education and industry in the form of staff secondments, joint research projects, consultancy, industrial placements and other exchanges.

However, as the Committee of Directors of Polytechnics told the NAB group, employers often find themselves unable to maintain the commitments they make to higher education. Their own companies naturally have first call on their services, some are discouraged by an impression of powerlessness when faced with the comparatively ponderous academic machine, and others lack the appropriate experience and breadth of concern to make a telling contribution.

Even some of industry's most vociferous critics of higher education recognise that the faults are not all on one side. Sir Kenneth Durham, chairman of Unilever, for example, is one who holds to the view that, even if things are not as bad as they were, higher education and industry remain on two different wavelengths.

He sees a prevailing attitude in higher education which is at best apathetic towards industry and continues to regard it as more prestigious to read directly at Cambridge and become a civil servant than to read engineering at Salford and design plant and machinery. The balance between the needs of industry and the other legitimate demands on the education service do not reflect the importance of industry in all aspects of life.

One academic better placed than most to make a dispassionate assessment of the situation is Sir Bruce Williams who, as director of the Technical Change Centre, has seen relations between higher education and industry at close quarters. In a new publication on the role of higher education in industrial innovation, he writes: "There are important and proper differences in objectives, processes and products of universities and industry, and in their respective international league tables the British universities stand much higher than British business firms. Indeed, in some respects, British firms will have to move some of their management processes closer to those of the universities if they are to get a higher position on their international league table."

He concludes that universities cannot be expected to have a strong direct stake in the national effort on innovation, although the free exchange of information with industry should stimulate activity. It is not reasonable to expect universities to become power-houses of innovations, Sir Bruce argues, but the indirect impact of their research will continue to be important, even where it may have no apparent relevance to industrial problems.

Suspense their emphasis on academic autonomy, British universities allow professional institutions to have a considerable influence on degree courses in the professional faculties," he points out. "In so far as industrial companies have had little influence it is because of lack of interest or numbers - a legacy of the anti-intellectual tradition in many sectors of industry - their scientists and engineers have had little influence in the professional institutions."

Such an attitude may be complacent in the face of continuing criticism of higher education, but the mounting pile of evidence showing initiatives from the higher education side may soon produce something of a counter-attack.

The difficulty lies in the different timescales in which the two sides can expect to reap the benefits of further collaboration. While higher education can expect short-term benefits and is under immediate pressure to step up levels of activity, the advantages for industry take longer to accrue and are less certain. The new climate within higher education will make further expansion of links inevitable, but before long it may be industry which is being criticised for its inflexibility and reluctance to seize opportunities.

Sweden joins space age with Viking expedition

by Thomas Land

Sweden has entered the space club in a big way. Viking, the first satellite entirely controlled from the Swedish space facility Esrange, is engaged in studies of the Northern lights which scientists here believe will widen their understanding of mechanisms controlling electronics, the weather and plant growth. Sweden is also collaborating in advanced studies with space research institutions in France and the Soviet Union.

The Viking project is likely to cost \$17.3 million and supply scientific data principally to three Swedish institutions, the Department of Plasma Physics at the Royal Institute of Technology in Stockholm, the Ionosphere and the Kiruna Geophysical Institute. Owned by the Swedish Space Corporation, the satellite is employed in analyses of the magnetic fields and particles which cause the aurora borealis phenomena.

The physical mechanisms associated with the appearance of the Northern Lights are not properly understood. As magnetosphere and plasma systems are common everywhere, our understanding of them is very important for our knowledge of the universe. Changes in the magnetosphere also affect conditions on earth, including the climate, the weather and the growth of plants. Magnetic storms can cause disruptions in electric power systems, railway signals and telecommunications.

Built by Sanb Space (a division of Sweden's Saab-Scania industrial group), the 286kg Viking is 50cm high and measures 190cm in diameter, resembling a heavy disc. It revolves around its axis three times a minute. Its trajectory is an elliptical polar orbit, with a maximum distance of 14,000km and a minimum of 8,000km from earth. A full orbit is completed every 265 minutes.

العدد 1550

If you ask Roy Lewis what he does in his spare time he will probably mention something about reading, walking, watching rugby on the box and... doing the odd spot of writing.

Such modesty is becoming but misleading. Over the past 30 years Lewis has had 12 novels, 14 textbooks, a history of the Victorian Bar and a score or more short stories published.

Nothing if not prolific, he writes a new novel - his forte is crime thrillers - every eight months. Ten of his novels have been published in the United States, five in West Germany and several others in France, Portugal and Italy.

While writing he has also managed to qualify as a teacher, company secretary and barrister, bring up three children, set up several publishing companies and rise through the ranks to become principal of Wigan College of Technology. He gets edgy, he says, if he's not active.

A quietly spoken Welshman with an unassuming manner, Lewis is on the face of it an unlikely figure to cast in the role of dynamic educational administrator, author and entrepreneur.

The son of a miner from the Rhondda valley, he read law at Bristol University before national service in the army and a year at Exeter University training to be a secondary school teacher.

After 18 months teaching English, rugby and handicraft in a secondary modern in Okehampton, Devon, (he was playing rugby for Exeter at the time), he managed to land a job as a law lecturer in Cannock Chase Mining and Technical College. Two years in the Midlands were followed by a spell at a Cornwall technical college and four years at Plymouth College of Technology.

Not content with resting on the laurels of his first degree and teaching qualification he spent his spare moments studying to become a qualified chartered secretary and then reading for the Bar.

"I suppose when moving into the FE sector I looked around my field and realized that while a degree was very useful you needed to be able to demonstrate a wider experience in terms of teaching possibilities or background. By taking the chartered secretary's examinations in economics, government, administration and secretarial practice... I broadened my experience and got a very good grounding for administration," he says.

As for the Bar: "That was pride I think," he says. "I had always wanted either to be a solicitor or a barrister but I couldn't afford it as a young man. In those days to become a solicitor you literally had to pay to become articled and my father was a miner who left the pits when he was 47 with pneumoconiosis and there was no money in the family."

While gaining his professional spurs his fiction had also been coming on apace. Having enjoyed writing as a youngster, he edited his school magazine, on completing national service

They all laughed, according to Cole Porter, at the Ford Lizzie, the Wright Brothers, and the invention of the wireless.

They also all laughed in 1981 when Dundee University's departments of French and German merged into a single department of modern languages. The merger had no chance of success, the cynics said, since the two languages did not share the same teaching traditions, and any joint approach would be undermined by the countries' national differences and wartime memories.

Five years later, the department is having the last laugh, with thriving joint honours courses, and an international reputation as a leader in the field of computer-assisted language learning (CALL).

The department's head, Professor Rex Last, attributes the success of the merger largely to the ethos of Dundee's arts and social sciences faculty of collaboration and co-operation.

"We don't have any moats with piranhas in them. We teach for the English department, geography and politics teach for us."

The broad range of joint honours with French and German includes statistics, accountancy, modern history and economics.

"I take the view that students have a right to expect the kind of education which is not just academic but will help them when they go into the cruel world outside," Professor Last says. Even in a single honours language degree, equal emphasis is placed on fluency in the written and spoken language, and the country's cultural, literary and historical traditions.

"One of the mistakes which seems to have been made in languages is an exclusive attitude to a particular approach. You concentrate on communicative competence, and throw grammar out of the window. But it's not either/or, it's not



Roy Lewis: gets edgy if he's not active.

The paperback professional

Simon Midgley on Roy Lewis, administrator, teacher, company secretary, barrister - and author.

he borrowed £20 from his wife to buy a typewriter and started penning short stories.

Over two years in the mid-1950s he wrote around 120 stories before getting one accepted by a magazine. "I used to write a story and post it off and then before the rejection slip came back I would write another and post that off, so that when the rejection slips came flooding in, I was never so disappointed that I stopped because there was always one out there with a bit of hope that it would sell."

In 1956 he struck lucky. An Australian magazine, *Afan* - stock-in-trade photographs of semi-nude women and vaguely risqué cartoons - accepted a story. His particular brand of escapism, action packed, blood and thunder thrillers, had found a market at last.

For the next four or five years he wrote for *Afan* regularly and contributed to several other magazines. On moving to Plymouth Technical College, however, he began to channel his creative energies in new directions.

As well as writing articles for the legal press he turned his hand to legal textbooks. A stream of titles - *Law for the Retailer*, *Law for the Construction Industry* and *Landlord and Tenant*, for example - followed for publishers like Macmillan, Sweet and Maxwell, Butterworths and Pergamon Press.

"It was really the same book 14 times," he says. "What I would do was to take the basic law, law of contract, law of tort, law of property, but write it not for lawyers but for a specific market."

On being called to the Bar in 1965 he decided not to practise as a barrister. By this time married with a young family he considered it too risky to begin a new career. Apart from some consultancy work for industry and commerce he opted to stick to teaching, which he enjoyed anyway.

Two years later at the age of 33 Lewis joined Her Majesty's Inspectorate in Newcastle upon Tyne as probably the youngest further education inspector in the country. The next eight years were spent inspecting business studies departments in the north east.

HMI's are forbidden to write textbooks, Lewis, who had by now proved to himself that he was capable of writing at length, decided to try his hand at a novel.

"I had read a crime novel that I didn't think was very good, so I thought, well I'll have a go. After writing the first I sent a synopsis to Collins and they accepted the book and asked for more."

In 1975, rather than accept an inspectorate posting to Hertfordshire,

he opted instead to become vice principal of New College, Durham, an FE institution created from a merger of Durham technical college and a local education college. Here, true to form, apart from writing novels in his spare time he also took the opportunity to study for a masters degree in sociology at Durham University.

It was around this time that he began to dabble in publishing. His first company, Felton Press Ltd, published and distributed a handful of books before his move, in January 1981, to Wigan and his own principality.

Felton Press Ltd has now been succeeded by another limited company, Templar North Publications, which has published two of his titles to date and acts as a useful conduit for his literary earnings which with the introduction of public lending rights have now become quite healthy.

Since arriving in Wigan he says that the diverse strands of his professional and creative life have dovetailed. Apart from setting up a college publishing company, Wigan Tech Publications, he has also been instrumental in the college securing a £250,000 grant from the Manpower Services Commission's Open Tech scheme to produce a distance learning business programme.

The idea is to train engineers and

technologists in business studies offering them a range of study packages in finance, law, management, marketing and communications. By date 20 of the eventual 50 packages have been published, £50,000 worth of material has been sold.

"Suddenly," he says, "events began to fit into place because of my writing experience, my editing experience and my educational experience now meant that I could use all these draw around me a group of people to produce this guide... to set up a creative programme and a publishing and warehousing and distribution business in this college."

Today, aged 53, he is the author of around 50 books. In the UK his thrillers have mainly been printed in paperback but two have found their way into soft covers under the Penguin imprint.

Apart from his literary work he writes and edits for the professional journal of the Institute of Chartered Secretaries and Administrators. He finds the time to do a fairly substantial amount of professional and educational writing.

His literary success has been such that he has been able to buy a house on the Costa Blanca. As a college principal he earns around £25,000 a year and then receives about half a much again from his writing activities.

While an HMI was the main character or "hero" of several of his earlier thrillers, Lewis does not generally write novels based directly on college life, preferring instead to draw more widely on his experience of life.

His current heroes are a Newcastle solicitor with glaucoma and a planning officer with a passion for modern buildings. Fortunately his college in Wigan has good law and construction libraries which he consults.

"Over the last five or six years most of my books have been set in the north east and I think this has accounted for their popularity because reviewers seem to like the descriptive passages about industrial Tyneside and the High Tury field in Northumberland," he says.

"I have often been asked why I write but I can't explain it. It's compulsive really. I can sit at home at weekends and do nothing, so, every Sunday morning and afternoon and occasionally on a Saturday morning I'm writing."

"I am a disciplined writer. After I have done the synopsis I will write a novel in four to six weeks. I won't say it's easy because I sometimes get quite depressed writing it but I do write fluently. I don't need to do much correction."

"I have never considered turning to writing full time, even though I could support myself on my income from writing, because I enjoy my job. I meet lots of people and regard writing as relaxation. I don't see it as a chore, it's complete relaxation. I enjoy it hugely."

ent in developing a range of language-learning software, much of which is commercially available. Ian Johnston points out that the Dundee approach differs from the general one. "CALL programmes by and large have been written to make the programming easier, rather than the student's life. A number insist that you type in small letters, and if you type capitals, they think it's wrong, or they won't accept an 's' on the end of a word."

"Most people think of what the answer should be, but here we try to look at the actual answer given and see to what extent it's right or wrong."

One Dundee project, for example, intended to check whether a student has grasped the essential elements of a text, accepts a certain amount of natural language, rather than insisting on a specific response.

"We are not working in a tutorial mode of right or wrong," adds Rex Last. "It's an exploration of knowledge rather than question and answer. A lot of language learning is passive, but this is active."

The only problem is the perennial one of finance. Dundee's pioneering research falls between every possible stool as far as research council funding is concerned, Professor Last comments. And he is surprised that despite the lead the department has taken, it is not an area singled out for special treatment in internal planning.

"I think long term strategy has been lost sight of. People say everyone should go into science and technology, and at the same time say we need an expansion of knowledge, which isn't science-based at all."

"We are not a frivolous luxury. We educate people to be adaptable, and offer them an opportunity in a hard world to have a career in a series of careers."

Bernard Jackson, party of the first part, examines the linguistics of legal utterance

The use of linguistics in the study of law has a long, varied and unsurprising history. Law is predominantly expressed in language, and that language has a distinctive character. Both the distinctiveness of legal language, and its manifestation of linguistic universals, have been reflected in legal scholarship.

In the 19th century, the historical jurisprudence of Sir Henry Maine, the first holder of the chair of jurisprudence at Oxford, was modelled to a large extent upon comparative philology, with its discovery of the common ancestry of the Indo-European languages, and its interest in the regularities of their divergent development.

More recently, a range of sociolinguistic approaches have been applied to a variety of types of legal document. The convoluted language of loan forms and insurance policies has revealed the presence of linguistic features more commonly associated with poetry. A socio-linguistic examination of this phenomenon is that such "thickening" of language provides the reader with a sense of reassurance, designed perhaps to neutralise the unease which flows from the incomprehensibility of the language to the lay person.

In the United States, in particular, there is a strong "plain English" movement, which has sought to show that legal documents can be written in a manner intelligible to the lay person (though naturally they will be longer than the originals), without sacrifice of legal accuracy.

Socio-linguistic approaches have not been confined to written legal documents. The application of conversational analysis to the formalized oral interaction in court cases important light upon the intrusion of non-legal factors into legal communication, at the level of speech. The symbolic acts, into the very centre of jurisprudence, of legal institutions have attracted increasing interest from criminologists and sociologists.

Yet little of this has entered the mainstream of legal scholarship. In most law schools (Kent is a happy exception) historical, sociological and linguistic (together with most other "non-legal") approaches to law exist in the margins, restricted to optional courses offered by isolated individuals, whose eccentricity is countenanced to this extent. This state of affairs is understandable, even in purely academic terms. For such approaches to law have rarely presented themselves as genuine and necessary complements to dogmatic study, rather than as interesting but non-central appendages.

We now have the opportunity to take a step forward. Linguistics has provided the impetus for the revival of semantics, the study of signs in general. The range of semantics far exceeds that of general linguistics. Not only does it

investigate how language comprehends speech as well as writing, and that the study of written texts must include holistic approaches to entire discourses, as well as analysis of the traditional unit of the individual sentence; it also comprehends signifying practices other than language, such as music, art, architecture, many forms of social action, and indeed animal communication. There is a healthy relationship between theory and empirical work. General semiotic theory supersedes an agenda of questions to be posed in empirical studies; the latter produce insights which qualify and refine general theory, and in turn integrate linguistics within the more general study of signs and signifying activities, a more complete account may be given of the role of language in the construction of meaning.

It is ironic that some of the major figures in the pre-modern history of semantics have proved major sources of inspiration to legal theorists, but without reference to their contributions to semantics. This is true of both Locke and Bentham. Yet the centrality of such issues to legal philosophy is gradually being appreciated. H. L. A. Hart, the leading British legal philo-

Making an ass of language?



sopher of the post-war generation, has delicately introduced Wittgensteinian notions of meaning and use, together with Austinian concepts of speech acts, into the very centre of jurisprudence. The debate regarding both the concept of law itself and the meaning of different types of legal utterance.

But neither Wittgenstein nor J. L. Austin provide general semiotic theories, despite the importance of their contributions to that broader objective. In the last five years, a growing international band of scholars has come together, under the banner of "legal semiotics", to explore the whole range of signifying activities which make up the law. Special sessions at both general semiotic and legal philosophical conferences have been devoted to legal semiotics. A colloquium exclusively devoted to legal semiotics was held in France last year, and the first UK conference on law and semantics will take place at Kent this coming July. Conference volumes, journals and monographs are appearing in increasing number, from many parts of Europe, the United States and Latin America.

What characterizes the present state of legal semiotics is the variety to be found of both theoretical models and empirical work. General semiotics tends often to divide into two rival camps: one deriving inspiration from the work of the 19th century American philosopher, Charles Sanders Peirce, and stressing both logic and pragmatism; the other deriving from the Saussurian tradition of linguistics, and having more in common with the key theoretical issues between these rival approaches is that of "referentiality", whether the structure of meaning involves reference to something ("the referent"), or whether such "reference" need be to anything but some other "meaning content" in this, or some other, system of signification.

The theoretical agenda of legal semiotics is also informed by questions from communication studies, information science and social theory. The formal characteristics of legal language and of the legal rules expressed by natural language are investigated, often through the use of computer models. The content of the legal message is

related not only to the style of the language used, but also to the medium used to transmit the message, and to presuppositions regarding the audience for whom the message is intended. The use of different signs to convey (often in a concealed manner) the power of legal institutions, and of the people standing behind them, is both informed by, and contributes to the detail of analysis of, modern social theory.

The empirical studies which both exemplify and contribute to this range of theoretical concerns include such diverse topics as the use of zoological metaphors by judges in the course of legal argument, structural features of the French civil code, the workings of the French Stock Exchange, newspaper reporting of criminal trials, and the use of reported speech in ancient codes. Behind many of these studies, one detects an attempt to separate and interrelate two questions: what makes the practice meaningful at all, and what makes it meaningful as law?

It is not difficult to show the relationship of these issues to the mainstream of jurisprudential theory. A significant step in this direction was made by the Scandinavian realists, particularly Olivecrona and Ross. The former called attention to the whole range of factors which contribute to the communication of the legal force of a particular utterance. He saw law in terms of the production of feelings of compulsion in the minds of the addressees, this process of production being conceived primarily in psycho-linguistic terms. Ross stressed the difference between imperative and descriptive legal language (statutes and precedents on the one hand, legal doctrine on the other) and viewed the reduction of law to formal logic (here particularly, deontic logic as relevant primarily to the latter).

The most actively debated issue in legal philosophy over the last 20 years has been that prompted by Ronald Dworkin's attack on the legal positivism of H. L. A. Hart. Semiotics can, I believe, assist both in clarifying the claims being advanced on either side, and in providing answers to the very real problems raised by the debate.

Hart sees law as a system of rules. In difficult cases, where the rules run out, the judge has a discretionary decision to make. Hart accepts that this discre-

tion is not a purely personal, subjective matter; there exist conventional principles and standards which the judge should apply. Dworkin does not contest the important role played by judicial discretion in deciding hard cases. On the contrary, he provides a far more detailed and sophisticated account of how the judge reasons (or ought to reason) in such circumstances.

The major difference between Hart and Dworkin relates to the status or classification of such reasoning processes. Dworkin regards the principles and standards which the judge has to use in such circumstances as themselves part of the law, and thus that the answer to any difficult case is to be discovered by the use of such legal processes, while Hart does not regard such principles and standards as part of the law, so that their use by the judge in a difficult case results in the creation of a new law. In other words, law and discretion are for Hart opposed categories: discretion operates when law runs out; for Dworkin, the exercise of discretion (subject to the conditions he specifies) is part and parcel of the law.

Much of the debate on this issue has been conducted in technical, jurisprudential or logical terms: does the operation of legal reasoning in difficult cases negate the sufficiency of Hart's "rule of recognition" as a test of the identity of belonging to a particular legal system? Is it possible to talk about "one correct answer" or even "the best possible solution" to a difficult legal case? Can there exist "logical gaps" in a legal system?

I suggest that the differences between Hart and Dworkin are best understood in terms of the different semiotic models they presuppose, and to some extent expressly endorse. Hart adopts what I have called a "communicational model". Rules are intentional communications by legal senders (the legislature primarily in mind); difficult cases are those where the intentions of these authors are not adequately communicated. There, we have what Hart describes as a "crisis in communication". On the other hand, Dworkin rejects authorial intention as the key factor in ascertaining a legal meaning. He adopts a broader model of signification, in which communication of author's intent is only one criterion. Using New Criticism in liter-

ature as a model, he stresses the conventions of judgment of the addressees as providing criteria of plausible (though in difficult cases not conclusive) interpretations.

To put the matter thus might appear to endorse Dworkin's account, as being the more inclusive and semiotically sensitive. But matters are not so simple. It is by no means certain that both writers are thinking of the same type, or context, of the construction of legal meaning. For some forms of legal discourse do presuppose the existence of logical spaces, while others presuppose their absence.

It is clear that Dworkin is thinking of the latter type of legal discourse. The context, for him, is clearly that of litigation, and of the way both disputants and their legal advisers talk about a case before it has been decided. They come to court, Dworkin assumes, not only claiming rights but having rights. And those rights exist even though they have not yet been authoritatively determined. The judge cannot turn his back on the case. He must endorse the position of one party or the other, and he does so by endorsing pre-existing rights, not by creating them.

Dworkin is certainly correct if we focus upon the discourse of litigants' claims. Whether his account runs equally true to the discourse of justification by judges themselves has been debated; his criteria of conventional judgment sound rather more reminiscent of the classroom (didactic discourse) than the courtroom.

As for Hart, it is less clear what form of legal discourse he is claiming to describe. The viewpoint seems best to match that of the civil servant, of draftsman, associated with the production of legislation. The special language of legislative discourse has been studied by semioticians, particularly of the Polish school, and its differences from both judicial and doctrinal discourse have been highlighted. Here, in legislative discourse in particular, one finds logical spaces. For legislation (as opposed to the continental concept of codification) is a discourse of discrete propositions.

Of course, the Hart/Dworkin controversy starts from very narrow, and common ground. Both scholars presuppose a definition of "difficult cases" in terms of those which require appellate courts on a point of law. Many criticisms of such a conception have been offered, arguing in different ways that the conventional criteria of the interpreters do not merely resolve difficult cases, they also construct the distinction between "easy" and "difficult" itself.

Semiotic perspectives would require that we go much further. We should ask what is seen and what is not seen separately for each context in which legal messages are communicated. It is by no means to be assumed that difficulty is perceived in the same way in the citizens' advice bureau, the government or local authority office dealing with the public, the small solicitor's firms, chambers in the Temple, the academic's office, the magistrates' court, and the real tribunals.

It is, of course, part of the message of the legal system (communicated in ways which legal semiotics can reveal) that the law is no different in these various contexts. But that is a claim which has to be investigated. To do so, we can mount some very useful empirical inquiries. We can ask, separately in each of these contexts, what exactly are the sources of knowledge of the law. To what extent are they written, and to what extent do they rely upon informal, oral interaction? And when they are written, what written sources are used? Does legal difficulty appear different, for example, in practitioner's manuals than in arguments submitted to the appellate courts?

To pose these semiotic questions systematically, to ask precisely what is communicated, and how in different contexts, cannot be dismissed as peripheral questions regarding the character of legal language. It challenges us to assess the true character of the legal system (or systems) as a whole, and to investigate with genuine rigour what law is actually applied at different levels and in different contexts. We may find that the semantic clarity of language is only one, relatively insignificant, part of the semiotic apparatus of social control through law.

The author is professor of law at the University of Kent.

BOOKS

Vatican diplomacy

Webster and the Vatican 1919-1933: German-Vatican diplomatic relations in the interwar years
by Stewart A. Stehlin
Princeton University Press, £53.00 and £14.25
ISBN 0 691 053 99 5 and 101 95 7

One of the less well-known aspects of international relations in the interwar period was the remarkable revival of the diplomatic influence of the Vatican. As the author of this brilliant analysis of relations between the Weimar Republic and the Vatican points out, whereas in 1914 the Vatican had relations with only 14 states, that figure had doubled by 1928. And by the early 1930s over forty states had diplomatic links with the Holy See, which had now become a major force in international affairs.

This dramatic growth in the international influence of the Vatican is largely explained by the massive changes in the territorial settlement of Europe brought about by the Versailles peace treaty. New states, even though they were Protestant ones like Estonia and Finland, sought recognition of their independence from one of the world's oldest powers: old states, like France for example, resumed relations with the Vatican in the 1920s in order to secure the Vatican's moral and diplomatic support in the many disputes which followed Versailles. For the same reason, Germany reinforced its links with the Vatican.

The fledgling German democracy needed the support of the Vatican if it was to mitigate, or at least delay, the effects of the enormous territorial losses in West Prussia, Upper Silesia and Eupen and Malmedy, and if it was to prevent the temporary transfer of the Saar to France from becoming permanent. Stehlin clearly demonstrates that the Vatican's desire to avoid precipitate action in the settlement of European boundaries with the new international borders and its concern for the rights of minorities were crucial for the success of German policy.

Indeed, Weimar Germany enjoyed what might almost be called a "special relationship" with the Vatican, the latter's benevolent attitude being determined less by the pro-German stance of its nuncio Pacelli (later Pius XI) than by its sense of justice, by its desire to re-establish the balance of power in Europe and by its anxiety that Germany should function as a bulwark against communism. As the author recognizes, the Vatican was obliged to perform a delicate balancing act in such difficult situations as the Ruhr crisis in order to preserve its international reputation for impartiality. The Vatican not only supported the Weimar Republic as such, it also gave its reluctant blessing to the coalition between the Catholic centre party and the SPD on which that democracy depended in its early years - a far cry from the situation in Italy where Pius XI resolutely opposed any cooperation



A 1665 engraving of the Piazza S. Pietro, taken from *Visionary Spires* edited by Sarah Crewe (Waterstone, £16.95). The book collects together plans and drawings for many churches that were never built.

between the Catholic PPI and the reformist socialists, an alliance which might have spared Italians the tragedy of fascism.

The Vatican's relations with Weimar were bedevilled by the complex relationship between the central government and the *Länder*, some of which, like Bavaria and Prussia, were jealous of their traditional privileges and especially of the right to retain their own representatives with the Holy See. As a result, it was not until 1925 that Pacelli, now nuncio to both the Reich and various *Länder* governments, felt it prudent to transfer the centre of his operations from Munich to Berlin. When he did, it soon became evident that the Vatican's aim to conclude a *Reichskonkordat* was being delayed by the obstructive attitudes of both secular and Protestant forces.

In the end, the hoped-for *Reichskonkordat* eluded the Weimar Republic. Hitler, however, was much more successful. The Vatican's bitter experience with fascist Italy after the signing of the Latraco Pact in 1929 made it all the more anxious to obtain juridical guarantees of the church's rights under the new Nazi dictatorship. As Stehlin remarks, "Had Weimar signed a concordat with Rome it would have deprived Hitler from making some political capital both within and outside Germany. Tragically, what democracy was unable to provide, a dictator was able to offer." Nazi Germany thus secured early recognition from the Vatican.

This is a very distinguished and scholarly study which not only casts light upon the internal problems faced by the Weimar Republic in its relations with the Vatican, but also offers an illuminating insight into the powerful diplomatic role played by the Holy See in the 1920s and 1930s.

John F. Pollard

John F. Pollard is lecturer in Italian history at Cambridge College of Arts and Technology.

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HARVARD

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The church in politics

The Vatican, the Bishops and Irish Politics 1919-39
by Dermot Keogh
Cambridge University Press, £27.50
ISBN 0 521 30129 7

It is now many years since Conor Cruise O'Brien, in a memorable essay, characterized the "Parnellism" of Irish church and state relations: the Irish political conviction, deeply implanted in the national tradition, that the Catholic Church should not bring the direction of Rome to bear upon the internal affairs of the country.

Since, as everybody knows, Catholicism has been so important to the historical cultivation of Irish self-identity, the separation of the church from politics was always difficult. Nationalists were impatient with priests and bishops who were tardy in their exaltation of national aims, but furious if their enthusiasm extended to real attempts to direct the course of events. There was, throughout the 19th century, and into the first decades of the 20th, a persistent belief, furthermore, that the British government was forever on the look-out for suitable occasions to exert pressure on the Vatican against Ireland's national aspirations.

Women in the pulpit

Prophetic Sons and Daughters: female preaching and popular religion in industrial England
by Deborah M. Valenze
Princeton University Press, £27.50
ISBN 0 691 05455 X

"God often works by strange instruments" mused a Wesleyan Conference President's obituary. "Balaam was converted by the baying of an ass, and Peter by the crowing of a cock; and our lamented brother by the preaching of a woman one Good Friday morning."

The preaching woman was Mrs Zachariah Taft. It is with her sort that Deborah Valenze's book is concerned. *Prophetic Sons and Daughters* is a study by James Obelkevich of *Religion and Rural Society* (1976) out of W. R. Ward's *Religion and Society in England* (1973). Its large and respectable family circle naturally includes E. P. Thompson, who is admired but rejected. The book, however, stands in its own right. Few party lines are touched here. Its field is the world of cottage evangelism between the 1790s and the 1850s chiefly as mediated by that world's representative figure, the "methodist" in Ireland, and chiefly as defined by dissident and dissenting we have, alongside an exploration of the common Wesleyan heritage, the Quaker Methodists of Warrington, the Female Revivalists of Leeds, the Independent Methodists of the North

West, the Primitive Methodist fisher folk of the North East, the Bible Christians of the South West. We have case studies which range from Belper to Filey. Only the New Connexion Methodists are absent. The book's harvest is the tracing of the relationships between the work, family and community of this cottage world and its beliefs and practice in an industrial society.

The book's discovery is the extent to which religiously articulate cottagers struggling to cope with change and rooting their faith firmly in the ethos of the old world of work, used their faith to separate themselves, indeed to individualize themselves, from any industrial ideals of "progress". This was positive resistance, not blind reaction, and at the brief stage where vulnerable labourers and small-holding cottagers were thrown back on the domestic unit, their economy was a last-ditch cottage economy, what was more natural than that their women, those key people in the cottage economy, should come into their own as religious leaders? Or that there should develop, however fleetingly, a distinct domestic, religious ideology? It was impolite. It was noisy. Its hymnody was a marvellously moving catalogue of grievances. But it cared. Those illegitimate births which are such a feature of early Primitive Methodist registers testify to the fact that Primitive Methodism had a place for their mothers. Here was a society whose members were vulnerable to change but who were saved from the indignity of being the passive victims of change.

Of course the story fizzles out. The cottage world was doomed. Here is another world we have lost. Success, beginning with the Wesleyans, and continuing with the Quakers, the

Persico had visited Ireland in order to inquire, on behalf of the Vatican, into the involvement of the clergy in the agrarian agitation of the 1880s. The result, in 1888, was Rome's condemnation of the "Plan of Campaign", the spread, in its day, of the popular alliance between the land and the national questions. This intervention by the Vatican sent a frisson of horror down the national spine, and the consequent rejection of organized episcopal involvement in political affairs has been a feature of Irish politics ever since. When the clergy have stepped out of their "own sphere" — as over education, moral legislation, some sorts of welfare issues — there has usually been a row. (So critically did the Persico episode enter the national collective memory that when I was received by De Valera, in 1961, to talk about then current issues of church and state relations, half the time was spent discussing the Persico mission.)

It is therefore into a very lively and historically important area that Dr Keogh has ventured. What he does is to look at events between the election of the first Dail and the scrapping of the Free State Constitution through the vision of the chief participants on both sides. This book is especially admirable for its perspective, and at times quietly humorous, studies of leading churchmen. Here we see Archbishop Walsh, whom Dr Keogh clearly regards as the most realistic and sensitive of the principals, caught up in a network of personal relationships with other bishops, Roman officials, and Irish politicians. Walsh was known to James Joyce as "Billy with the lip". It is now possible to see why. Here, too, are excellent sketches of the blunter Cardinal Logue, and of Hagan, in Rome, acting on behalf of the Irish hierarchy in attempting to overcome Vatican prejudices about Irish capabilities.

It is possible that Dr Keogh rather exaggerates Cardinal Gasquet's partiality for the English, and it is splendid to find him amused by it himself. A rumour circulated in Rome that Gasquet was being paid £300 a year to work against Home Rule. The supposed recipient was outraged. "I would work against Home Rule for half that amount," he declared. Those were the days when ecclesiastics were allowed to be humorous. Dr Keogh's study, despite these asides, is serious, scholarly, based on original archival materials, and structurally sound. The final conclusion is that the involvement of the Catholic bishops in Irish national politics has been much exaggerated: they were far too divided among themselves for that.

E.R. Norman

Dr Norman is dean of Peterhouse, Cambridge.

BOOKS

Unequal partners

Margaret Cole 1893-1980: a political biography
by Betty D. Vernon
Croom Helm, £19.95
ISBN 0 7099 2611 1

Of the famous couples involved in the labour movement and the Fabian Society, there are the Webbs (of course), the Shaws (perhaps), and then there are the Coles, Margaret and Douglas.

The Coles have usually been likened to the Webbs, and although of course there are similarities the comparison is not strictly accurate. If Douglas was, in some ways, more original thinker than Sidney, Beatrice was more formidable than Margaret. As a working partnership the Coles are thought to have less weight, less *gravitas* than the Webbs, even if the latter did see themselves as possessing only "second

rate minds". The "firm of Webb" was a partnership because the two partners would not have it otherwise, and the famous "we" reflected a true welding of personalities and interests. The marriage was one between equals, as Betty Vernon hints, Margaret's role was that of the supportive female, not that of equal wife.

Intellectuals, political polemicists, educationists and revivifiers of the Fabian Society, the Coles were also attached to the Webbs. Neither was the traffic one way. The Webbs approved of the Coles, "always attractive... they are at once disinterested and brilliant intellects", while Douglas's *Guild Socialism Re-Stated* influenced the Coles' only theoretical work, *Constitution for the Socialist Commonwealth of Great Britain*. Margaret on the other hand felt for a long time that they thought of her as a "kind of umbrella [D] was allowed to bring with him".

Margaret Cole, born Margaret Postgate, sister of Raymond Postgate, was brought up in a conservative academic home, from which she was sent to Rodean, to be followed by Girtton. Her brother's imprisonment in 1916 as a conscientious objector turned her into a socialist, while her work for the Fabian Research Department, as well

as her marriage to G. D. H. Cole in 1918, ensured her growing involvement in the labour movement, though as a somewhat rebellious guild socialist among the more staidly collectivist Fabians.

From London the couple moved to Oxford. With no mental work to occupy her, Margaret grimly attempted to settle down as a mother and that inferior being, "a don's wife". She turned to the Workers Educational Association as an outlet for her considerable energies, a decision which brought a lifelong commitment to adult education. And yet, despite a move back to London, collaboration in pamphlets, joint editorships, and the writing of detective novels, Margaret's role remained subservient to that of Douglas, "The Authority" as she revealingly called him. It was not until 1938, some twenty years after they were married, that Margaret produced her first book, *Marriage*, an interesting insight, given that she had at least one serious extra-marital relationship, into her own marriage.

The New Fabian Research Bureau, set up by Douglas in 1931 to "undertake solid social research" and very much in the Webb tradition, was soon so successful in its research and publication output that it outshone the nearly moribund Fabian Society with which it eventually merged. Margaret now began to come more into her own, becoming honorary secretary and leading light of the revived society.

The war provided the opportunity for her to emerge as a personality in her own right. Co-opted on to the London County Council Education Committee, she served as an alderman until the LCC's demise, became one of the foremost publicists for comprehensive education, was a member of London's further education committee for 17 years, and helped set up prestigious teacher training colleges. Her energy was legendary, she was not only a political journalist and labour historian of some stature, she also produced books on the Webbs and edited Beatrice's diaries.

Betty Vernon has painted an attractive picture of a lively, intelligent woman who helped to give direction to socialist thinking in the interwar years, and whose passion for education shines through the pages — though at times a greater historical perspective would have been useful. There is also too little discussion of Margaret's writing. But Margaret's relationship with Douglas, based partly on deep affection, some irritation and a considerable emotional distancing is treated with deftness, as is the interlocking connection between the Coles and the Webbs. Betty Vernon's book is a more than useful addition to the growing literature on Fabian thinkers.

Lisanne Radice

Dr Radice is lecturer in government at Brunel University.



Margaret Cole in 1922

The right to buy

Public Housing and Private Property 1970-1984
by Stephanie Cooper
Gower, £18.50
ISBN 0 566 05004 8

Of all the elements that make up the British welfare state, council housing has proved to be the most vulnerable to attack from a government of the right. Three quarters of the planned reduction in public expenditure during the first four years of the Thatcher government fell on the housing programme, and since 1980 a combination of sales and a reduction in new building has meant that, for the first time since 1919, the council sector is now getting smaller.

Furthermore, there has been a major shift in the redistributive effect of housing finance. Council housing is now virtually self-financing, with comparatively few tenants benefiting from any general subsidy from the taxpayer. £1,423 million in 1980/81 to £290 million in 1983/84. In contrast, subsidy to the owner-occupied sector through mortgage interest tax relief has swollen to an estimated £3.5 billion in 1984-85. As yet, no political party has felt insecure enough seriously to question the extent of home-owners' privileges.

In a competent and comprehensive

narrative, Cooper describes in detail the direction of housing policy since 1970: the struggle between central and local government over rent-setting; the chaotic implementation of the Housing Benefit Scheme; the reduction of Exchequer subsidies and the consequent steep rise in council rents; and the introduction of the "right to buy" and the curtailing of councils' building programmes. These events are analysed in terms of a changing balance between private and public property and of the relationship between private ownership of housing and individual rights. In particular, by comparing the treatment of Crown Estate and housing association tenants with that of council tenants, Cooper shows that the motivation behind the right to buy was less a concern with "enfranchisement" of the tenant class and more a straightforward desire to reduce the size of the public sector.

For supporters of public housing, Cooper's conclusions are somewhat depressing. In her view the restructuring of housing tenure that has taken place, and in particular the marginalization of the role of the council sector, is irreversible and reflects an underlying political convergence. Although there was an intensification of these trends under the Conservatives after 1979, "policy had been moving inexorably in this direction since Labour turned away from the claims of social justice, and equated owner-occupancy with the natural form of tenure". Moreover, Labour's past failure to seize opportunities for reform of housing finance (particularly in the mid-1970s) seriously undermines the credibility of their present policy of a "right

to choose" based on a neutral housing finance system.

Cooper therefore places housing policy in a social context of a fracturing of the postwar consensus about the welfare state. "While inequalities were once questioned they are now acknowledged to be a necessary corollary of the market society... It is upon these social values that the new system of property is grounded". Hence, any significant change in housing policy requires a shift in attitude among the electorate towards a greater emphasis on notions of equity and collective responsibility. However, in Cooper's judgement, so far, at least, "the electorate are keeping faith with the new political order".

Cooper's case is sometimes overstated: council housing is not yet at least, welfare housing. More importantly, it seems inescapable in the longer term that the constantly expanding volume of tax expenditures on owner-occupation will come under closer public scrutiny, raising the possibility of a wider debate about housing equity and tenure justice. Nevertheless, her book is to be recommended, not only as a detailed account of housing policy since 1970, but as a sobering reminder of the scale of the task facing those who, like the author, "remain optimistic and hope for a measure of fairness in the eighties".

Mark Kleinman

Mark Kleinman is a research assistant in the department of land economy at the University of Cambridge.

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PSYCHOLOGY

Formative years

The Intelligence Men: makers of the IQ controversy
by Raymond E. Fancher
Norton, £14.95
ISBN 0 393 01982 9

Raymond Fancher takes seriously the proposition that the very life circumstances of participants in the nature versus nurture debate with respect to intelligence have influenced their positions in that controversy. Indeed, by examining their biographical details, he effectively weaves many such personal factors into the fabric of his main conjecture – that the discussion today still relies on basic methods and arguments produced in the middle of the 19th century.

Fancher shows that John Stuart Mill and Francis Galton were both forced by their fathers to follow intellectual pursuits at ages far below the norm. Mill – having not been capable of brushing his own hair at the age of fourteen – ended up an environmentalist who "did not deny the existence of innate factors altogether". Galton – with an interest in whistles and finger prints – ended up as an hereditaryist who "did not completely deny the effects of environment". Thus, they both grudgingly conceded some influence to the formative effects which they abhorred. Subsequent research workers are classified as trudging in the tracks either of Mill or Galton.

Mill saw "the prevailing tendency to regard all the marked distinctions of human nature as innate, and in the main indelible", as preventing human progress. Fancher seems to agree with Mill that if the poor are viewed as naturally inferior then politicians "will see little reason for even trying to improve the environments of the poor". However, the failure to perceive the reason is not of a logical kind. For, even if our abilities were totally innate, it does not necessarily follow that cruel and impoverished environments should remain unchanged.

A thread running through any account of the invention of intelligence tests is that they were conceived as mental detectors of heritable genius in young adults but successfully developed as gauges of mental retardation in children. Galton hopefully measured the head sizes and sensory acuities of about 9,000 visitors to the International Health Exhibition in London in 1884; but James McKeen Cattell at Columbia University in New York first used the term "mental test" in 1890 for the 10 basic measures, of which only the one for immediate memory would nowadays be found in an IQ test. It was Alfred Binet who, charged by a French government commission with the task of arranging special classes for the mentally retarded, constructed individual tests of the higher thought processes and de-

veloped age-related scales. In 1912 the IQ ratio itself was originated by William Stern, who lived to regret it; and in 1916 Lewis Terman multiplied the ratio by 100 to give the form of the IQ we use today.

Although Fancher alludes to some investigators still working with the more physiological indices linked with Galton, he fails to give any particulars of important current research – for example, that of D. E. and A. E. Hendrickson on electrophysiology and the work of Christopher Brand on inspection times. On the other hand, his straightforward description of Charles Spearman's correlational two-factor theory of intelligence at least mentions Geoffrey Thomson's alternative sampling theory and concludes with an approval of Stephen Jay Gould's recent criticism that Spearman relied a statistical relation & into a mental engine. Indeed, Gould is almost deflected throughout the book for his statement that "correlation alone cannot prove causality" – an observation forcefully made 60 years earlier by J. M. Keynes in *A Treatise on Probability*.

A chapter on twins and the genetics of IQ outlines the career of Sir Cyril Burt and notes his primarily environ-

mental interpretation of data. Here, Fancher praises the theoretical advances made by the condensation of his empirical material to the flames. He sets up Leon and Arthur Jensen as the heroes of the intelligence movement of the 1950s, for his hygiene movement of the 1950s, for his example, culminated in the School Medical Service (1907) but granted physicians the power to identify mental (and physical) defect. The intelligence test was merely one diagnostic tool among many. Among the health and welfare organizations which proliferated after the war were several guidance clinics, adopted by several local education authorities by 1939. The clinics defined mental illness, maladjustment and delinquency as problems requiring "psychological" diagnosis and treatment, but once again testers lost out. Although they had begun by the 1930s to develop tests of personality, differential psychologists could only record such variation. Unlike the psychodynamically-inspired "new psychology" which came to dominate the clinics, the testers were unable to explain variations of temperament in ways which promised treatment. Differential psychology failed as a clinical science because it had been formed as an effective discursive practice in the image of the test; measurement was the horizon of its thought and it could not think outside it. (Rose seems here to be assuming that scientific concepts are forged initially in the heat of social pressure but thereafter lose their malleability. If so, this is a contentious point which needs to be argued.)

Borrowing from Foucault and Canguilhem, Rose presents us with a conceptual history concerned less with psychology's specific achievements than with the evolution of its basic assumptions. Since the history of British psychology is still in its infancy, interpretive schemes of this kind are a useful addition to the historian's toolkit. Rose's ventures into the explanation of conceptual shifts, however, are

rather unsatisfactory. For example, in discussing the triumph of social hygiene over mental testing before World War I, he says nothing about either the power of the medical profession or the perceptions of interested political constellations, although both factors are commonly discussed in histories of the eugenics movement. Much of the time Rose's explanations are frankly idealist, ideas, more than social forces, are said to be the decisive enabling conditions for the emergence of differential psychology. Thus, eugenics (significantly, he calls this a "strategy" rather than a "movement") "was made

BOOKS

PSYCHOLOGY

A measure of mental ability

The Psychological Complex: psychology, politics and society in England, 1869-1939
by Nicholas Rose
Routledge & Kegan Paul, £9.95
ISBN 0 7100 9808 1

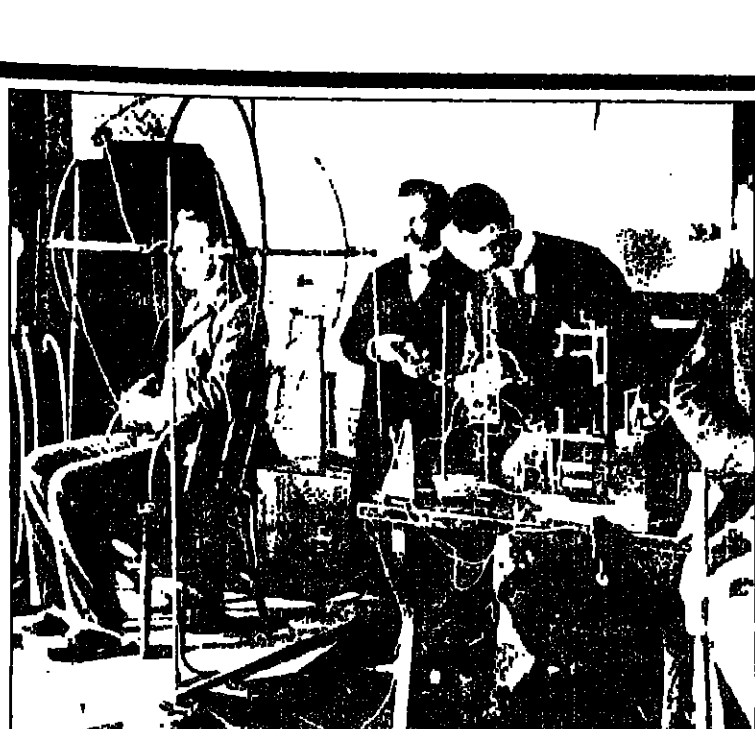
History of differential psychology in Britain have tended to trace its development from Francis Galton's late Victorian eugenics programme, via its interwar applications to occupational and educational selection, to the triumph of the IQ test in the 1944 Education Act. In *The Psychological Complex*, Nicholas Rose shows how testing actually failed to establish itself within new and important branches of the interwar welfare apparatus. The basis for this failure, he argues, lies in the fact that the theory and practice of mental measurement were designed to identify "social pathology" but not to cure it.

Three early chapters take us over some familiar ground, from the late Victorian concern with "the underserving poor" and theories of degeneracy, to eugenics and social hygiene as competing solutions to the problem of national efficiency. Government's response to the "threat of the feeble-minded" was the Mental Deficiency Act of 1913, which provided mental

testing with its first social recognition. The next four chapters, however, describe the testers' inability, before and after the war, to take advantage of the creation of new state agencies of surveillance and control. The social hygiene movement of the 1930s, for example, culminated in the School Medical Service (1907) but granted physicians the power to identify mental (and physical) defect. The intelligence test was merely one diagnostic tool among many. Among the health and welfare organizations which proliferated after the war were several guidance clinics, adopted by several local education authorities by 1939. The clinics defined mental illness, maladjustment and delinquency as problems requiring "psychological" diagnosis and treatment, but once again testers lost out. Although they had begun by the 1930s to develop tests of personality, differential psychologists could only record such variation. Unlike the psychodynamically-inspired "new psychology" which came to dominate the clinics, the testers were unable to explain variations of temperament in ways which promised treatment. Differential psychology failed as a clinical science because it had been formed as an effective discursive practice in the image of the test; measurement was the horizon of its thought and it could not think outside it. (Rose seems here to be assuming that scientific concepts are forged initially in the heat of social pressure but thereafter lose their malleability. If so, this is a contentious point which needs to be argued.)

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Designed to test the influence of dizziness on localization of sound, this "laboratory" was exhibited at the Chicago World's Fair in 1893, taken from J. M. O'Donnell's *The Origins of Behaviorism: American psychology, 1870-1920* (New York University Press, \$40.00).

possible by a reformulation of conceptions of population, variation and norm." For this kind of explanation to work, it is not enough simply to assert that a concept was crucial. One must portray the thinker struggling to solve a problem and failing to do so until the key concept has been invented or borrowed. Despite frequent references to social context, *The Psychological Complex* is history without the human agent.

Questions of explanation aside, the book's central thesis – that differential psychology crystallized around problems deemed to be pathological – is

unconvincing. To be sure, "the problem of the feeble-minded" fostered the eugenics movement's growth, and with it the search for reliable measures of mental ability. But Rose's own material makes it abundantly clear that eugenists were concerned not only to reduce the birthrate of mental defectives, but also to provide assistance for the "deserving poor" as well as for the professional middle-classes. Furthermore, some eugenics arguments cast doubt on the ruling classes' genetic fitness. According to various historians, eugenics and testing aimed to secure social efficiency through bringing the entire range of mental ability into alignment with society's requirements. Mismatch on all rungs of the social hierarchy would be reallocated in order to establish a "meritocracy". This thesis must be confronted and refuted if Rose is to persuade us that the foundations of differential psychology were constructed solely in response to a specific group of social deviants.

Moreover, much of psychologists' demonstrable interest in pathology arose for quite mundane reasons having nothing to do with Rose's thesis. The book cites many examples where psychologists have found "pathology" methodologically valuable because it unmasked the normal operation of the mind. But a concern with pathology in this sense is common to physiologists, geneticists, microbial biochemists, or indeed to sociologists of science who study controversy in order to understand consensus.

Although a flawed theory is better than none at all, I would guess that historians of psychology will find Rose's empirical material more helpful than his interpretation.

Jonathan Harwood

Jonathan Harwood is lecturer in the department of science and technology policy at the University of Manchester.

Testing industry

Psychological Tests
by Douglas Shelley and David Cohen
Croom Helm, £17.95 and £8.95
ISBN 0 7099 3384 3 and 13389 4

Nothing could better exemplify the difference between the United States and Britain today than the state of the testing movement. In the United States, employers long ago ceased to attach much credence to the countless "grades" issued by universities and colleges. Instead, they came to prefer the objective and nationwide assessment programmes of the multi-billion-dollar testing industry.

In parallel with this natural development of free enterprise, testing in the 1970s properly came under intense legal and professional scrutiny (for example, the National Research Council) – notably as to whether tests of intelligence were justifiable devices for selection and were fair to minority groups. As a result of this healthy tension between entrepreneurial initiatives and scrupulous legalism, the

United States now sports an amply vindicated set of testing instruments and some definitive academic assessment (for example, C. R. Reynolds and R. T. Buros's *Personality and Bias in Mental Testing*, that can serve both supporters and critics of testing as they plan their next moves.

Here in Britain, however, employers other than the Civil Service may perhaps rely on university honours results to identify people with first-class minds who would spell trouble if they were selected. Otherwise they hire on the basis of interviews ("Do you play golf?"). "Where were you during the miners' strike?" They may prefer graduates, but they do so without regard to those fine distinctions of quality that have exercised both academics and university students themselves throughout a lengthy period of state-aided preparation for honours examinations. In this policy the employers are supported, however strangely, by the egalitarianism that prevails in the social sciences – not least among British "social psychologists" who do not believe in government or personal merit, let alone that personal strengths and weaknesses are seriously measurable without an unacceptable risk of "labelling". Thanks to lazy industrialists and timid educational experts, we know more about

the state of the nation's teeth than about the state of its intelligence.

Shelley and Cohen's book is in every way a product of the British disease – with all the charm of the hypochondria, the 1960s liberal, the thought-disordered schizophrenic and the hyperactive cat at the back of the lecture hall rolled into one for the detection of those who have always doubted the wisdom of letting university students read psychology. The authors' contribution to the great debate about testing is to submit to what must pass for common-sense scrutiny an entirely capricious collection of almost-unheard-of "tests" – some of them mere experimental procedures. What they have in common is that the authors were able to get their hands on them without undue effort, for example, by hearing tell of them at meetings of the British Psychological Society – hence the authors' "perceptual maze test" for "perceptual maze test".

By an heroic effort of will, the critiques – many of which were previously published in the suitable context of mutual creativity, *Psychology News* – are organized into chapters that are plausibly introduced as dealing with the great "issues" of the day. Are people consistent? Are tests "valid"? Is sampling adequate? And, in the best chapter: do tests capture

real human individuality? The contents of the chapters, however, never live up to the ringing challenges of the opening paragraphs; and the authors repeatedly undermine their own uncertain credibility by howlers like their claim that IQ declines with age. Mental age does; Piagetian conservation does; and intelligence itself may thus be thought to do so. But IQ, precisely because it compares testees with their age-peers, cannot generally have this property.

Nor will the reader emerge much wiser even as to the nature of those techniques that are chosen for the authors' erratic and inconsequential commentaries. The authors' account of that favourite of British humanist psychologists, the repertory grid test, fails to mention the crucial "elicitation procedure" by which testees, instead of using reach-me-down adjectives supplied by a tester, first indicate their own special ways of describing and differentiating the personalities of their close acquaintances.

It might be argued that the book is redeemed by its modesty and good humour. For the authors allow that "testing is here to stay"; and they colourfully yet not unfairly summarize enduring disputes, as in "To the IQ fetishist, the Rorschach is a blot on the history of psychology; to the Rorschach lover, the IQ test is a fascist perversion". Certainly one has to say that their general approach – if not their ready identification with testees who like "buson Mary" and "gorging sausage rolls" – may well serve to attract and even to instruct the student who abhors psychometric psychology but who cannot relax from radical hysteria sufficiently to open any of the ("fascist") books by Hans Eysenck and Arthur Jensen.

At the same time, the book is a palpable reminder that Britain is not where the action is about testing. Even the feeblest test elicits approving noises from Shelley and Cohen if it might possibly identify the "needs" of the elderly for more taxpayer-funded intervention or if it vaguely hints at President Reagan's unfiness for high office. By contrast, the daily use of apparently impartial and well-validated tests to improve the efficiency and humanity of the American economy by about 20 per cent excites neither enthusiastic assent nor undaunted deprecation from these eccentric authors.

Christopher Brand

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Practical outlook

The Child's Point of View: the development of cognition and language
by Maureen V. Cox
Harvester, £25.00
ISBN 0 7108 0987 5

Child psychologists are in some difficulty nowadays when it comes to interesting their public. The trouble is that their predecessors in general, and Freud and Piaget in particular, made some spectacular claims about the young child's psychological make-up, many of which have turned out to be wrong. When modern psychologists now declare that this or that surprising view was greatly exaggerated, they run something quite banal.

Maureen Cox, whose book deals with one of the most striking claims ever made about children's intellectual skills, faces exactly this predicament but she surmounts it well by suggesting some alternative and genuinely in-

teresting ideas of her own. The claim in question was originally made in different ways both by Freud and Piaget: it is that the young child is engrossed in his own point of view and quite unable to work out that of others.

This rather negative idea is a central part of Piaget's theory of intellectual development and one which with characteristic ingenuity he managed to apply to a large number of different aspects of children's behaviour. Babies, he claimed, remember where a thing is in terms of their own past bodily movements towards it and not, as one might expect, in relation to the object in space (under the bed, by the door). When they want the object back they repeat that movement which has brought them the object in the past and often keep on doing so even if they see it placed elsewhere.

According to Piaget, children's concentration on the relationship between themselves and their environment persists through a large chunk of their childhood. One of his best pieces of evidence for this claim was his demonstration that school-children often make serious mistakes when they are shown a large three-dimensional model scene and are then asked to select the picture which represents the view

seen by someone else. They know which picture represents their own view, but not the one that depicts what the person at the other end of the table sees.

Piaget believed that young children are egocentric in social situations as well. The child who nods her head in answer to a question put to her over a telephone is a case in point. She does not properly understand that the person to whom she is talking has a different set of information about what is going on. This really is a startling suggestion, since it implies that young children know nothing about communication. What is the point of communicating if the person you are talking to knows what you know and feels what you feel?

Nowadays, we know that children are not so confined to their own point of view. They make the mistakes that Piaget claimed they make, but they manage to work out other people's points of view in other newer variations of his tasks and they do communicate information which they realize does not have. Even very young babies seem to be able to take in something about the other person's viewpoint.

continued from page 20

George Butterworth, for example, has shown that they tend to look in the same place as their mother when she placidly stares in a particular direction; and that is decidedly not egocentric.

Cox describes much of this recent work. Her own conclusions are kind to Piaget. She argues for two intellectual levels, which she calls "practical" and "representational". Her suggestion is that children in practical terms are not egocentric: they are aware that other people see and know different things from them. The children's difficulty is "representational": they cannot represent what these other views are. According to Cox, then, Piaget was right about children's representations. This is an interesting suggestion, but I find it unconvincing.

One of my doubts springs from the kind of mistakes made in the picture selection task by children who, according to Cox, would be easily old enough to understand that other people have different views. As Piaget himself reported and others have confirmed, some children often choose the picture of their own point of view when asked to find the one which represents someone else's. But that is the one mistake

which you would not make if you are aware that other people have a different view to your own. You may not be able to represent that different view, but at least you know that it is different from your own. Another problem is that young children have been shown to be able to "represent" other people's views when the form of representation is different. They do well, for example, when they are shown two identical scenes and are asked to turn one round so that their view of it is the same as someone else's view of the other scene.

Nevertheless, Cox's book is well worth reading. It is written clearly and enthusiastically, and its sections on children's language and on their drawings are particularly exciting. It is a pity, however, that she omits the interesting work which started with Piaget's discovery that babies often continue to search for a toy in the place where they have found it in the past even after they have seen it put somewhere else. That perhaps is something for the second edition.

P. E. Bryant

P. E. Bryant is Watts professor of experimental psychology at the University of Oxford.

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MIT Press, £14.95
ISBN 0 262 03110 8

If there is one central question in the field of cognitive development, it is the question of whether intellectual development involves fundamental structural changes or whether it is the piecemeal assimilation of factual knowledge into structures that are more or less innate. When we see, for example, children struggling with the number system and eventually mastering it, it is difficult to avoid the impression that they have acquired a whole new way of thinking.

But is this so different from an adult's struggling with and eventually mastering a computer programming manual? Indeed, could the main determinant of children's cognitive deficiencies be the simple fact that they know less than we do - that they are "universal novices" as one theorist has expressed it. The mental equipment that they bring to a new problem may not be qualitatively different from the mental equipment that we use. After all, when the problems are equally new to both child and adult - such as Rubik's cube - are we not often impressed by children's precocity?

The assumption of structural change has been a dominant motif in developmental psychology since the appearance of Piagetian theory - but it has not gone unchallenged. Behaviourism challenged it, and it is now being denied by a new wave of nativist theorists, largely emanating from linguistics and philosophy, and by a large body of experimental studies which children's thinking undergoes changes across the board. Cognitive development seems to have local and domain-specific than Piaget imagined - more influenced by the particular facts that have to be learned. For example, Piaget argued that young children's "animistic" tendency to say that, for instance, the sun and motor cars are alive was caused by their profound "egocentricity", which



From the second edition of Henry Gleitman's *Psychology* (Norton, £14.50).

makes them project what they have (an organic life, feelings, and so on) on to inanimate objects. But why can we not say that young children just do not know enough biology - that they are novices in determining what is alive and what is not?

Clearly, the choice between the structural change (Piaget) and the expertise (universal novice) views has to be made on the basis of the evidence. But, as Susan Carey says in this book, we should be careful not to abandon the structural approach prematurely, because it does at least impose order on the chaos of data. Her own view - a view that has grown out of the long-term research project that this volume describes - is a middle way. Children's thinking is indeed heavily determined by the bodies of knowledge to which they have access; but at the same time they have very few "theory-like structures" and so they generalize their theories to new instances in a peculiarly childlike way.

Carey begins by outlining on the Piagetian claim about childhood animism. Her experiments show that young children give the appearance of animism because they do not know enough biology to include animals and plants within the same category. In later studies she moves beyond the technique of the clinical interview to look at how children from around four to ten years and adults project animal properties (for example, cats, breathe) on to unfamiliar animals (for example, the microwave) and on to inanimate objects. Three kinds of model are tested: first, a conservative model based on what the child actually knows

about a given animal (for example, whether snakes breathe purely on the basis of what is known about snakes); second, generalization by definition (for example, the unfamiliar animal does breathe, just as the familiar animal does); third, similarity to an example (for example, given that this familiar animal breathes, is this unfamiliar animal sufficiently like it to breathe?). The three typified the thinking of 5 youngest children, but not that of older ones. The younger ones showed little differentiation between attribution patterns for the different properties - similarity to example, the sufficient fact for them, on a particular property about which were questioned.

The newest and most original experiments in the book examine the nature of the projection from an example. The children were asked to give a class of animals (snakes) the still less familiar "omental" used as the example for older children and were then asked whether they thought some other kind of animal also had them. Projection from one to other animals was the only trend; from other animals (for example, dogs) to people was less common. For young children, people are to prototype of the animal-like and vital, so to this extent they theorize quite distinctively. Carey concludes that these studies are a step towards related topics carried out by workers such as Frank Keil (MIT) on children's understanding of his domain standing) show that genuine conceptual changes take place during development, rather than the acquisition of mere expertise within given domains. One may add that projects from human prototypes is not a million miles from egocentricity.

Although the book is full of interesting data and sensitive discussion, one gnawing question remains: why were these studies not published as a monograph or as a series of experiments? This way they would have been more available to the research community and the reader could have had more confidence in the data. For some of the trends that Carey describes are weak and highly interpreted and the samples are often very small. In general, the main body of the book is difficult to read as a book, because of the plethora of tables, experimental details and statistics. Despite this, I found the general theoretical thrust of the book convincing.

James Russell

James Russell is reader in psychology at the University of Liverpool.

Neural circuitry

The Brain: an introduction to neuroscience
by Richard F. Thompson
Freeman, £33.50 and £17.95
ISBN 0 7167 1461 2 and 1462 0

Modesty about the state of their discipline is not one of the more salient characteristics of most neurobiologists. In a decade when "major new advances in our understanding of the brain" are announced almost daily, Richard Thompson's book is refreshingly caustic. "The sad truth", he writes, "is that scientists know less about the brain systems and mechanisms of sleep today than they thought they knew 20 years ago." Well, well... but perhaps the situation is better when we are awake? Apparently not. "Unfortunately," says Thompson, "the most is known about the least interesting aspects of behaviour, such as breathing, temperature regulation and thirst."

Despite these unencouraging remarks, Thompson's text has much to recommend it. It is, however, a very traditional volume, of the kind that used to be called "physiological psychology" before authors and publishers decided that "neuroscience" was a far sexier location. Within the structures of a wetware approach to the Thompson has done an excellent job summarizing the essential neuroanatomy, neurochemistry, and neurophysiology of the peripheral and central nervous system.

The writing is extremely clear, the coverage is reasonably up to date, and

the tone one of controlled enthusiasm for what has been uncovered about the properties of nerve cells and the circuits they form. The chapters on the structure of neurones, their biochemical properties, and the fine detail of synaptic transmission are lucid expositions of basic facts, illustrated with figures that are genuinely pertinent and revealing. In some instances, Thompson briefly relates how these facts were discovered, a pedagogical device usually abjured in such contexts, but one that this student at least finds very helpful.

The discussion then leads smoothly into the two chapters - "Neurotransmitters and chemical circuits in the brain" and "Peptides, hormones and the brain" - which do indeed recount major new advances in neuroscience. Twenty years ago, even 10 years ago, we had little inkling of just how extensive and complicated the brain's chemical pathways would turn out to be. Thompson succeeds admirably in guiding the beginning student through the maze of acetylcholine, amino acids, catecholamines, serotonin and peptides that is now beginning to define the functional circuitry of the brain. And, where appropriate, he shows how this knowledge may aid in the control and treatment of disease, including Parkinsonism and dementia, psychosis and addiction.

The chapter on sensory processes takes the student from peripheral receptors through to the discovery of cell columns and multiple visual areas in the cortex, as indexed by single-cell systems. This on motor control system, describes the neuromuscular system, spinal reflexes, and some of the functions of the cerebellum, the basal ganglia, and motor cortex. Both chapters are rather sketchy, and even in an introductory course would need to be supplemented by further reading. Similarly, the chapter on the life cycle of the brain is highly selective

and serves only to indicate the importance of the topic.

By the time he reaches "Brain and behaviour", Thompson's own interest seems to be flagging. "Very little is known", he writes, "about how brain codes and stores memories, and virtually nothing about the brain mechanisms that underlie consciousness and mind." One can see his point, but this is really no excuse for a very old-fashioned chapter that adopts a 19th-century gentlemanly approach to the study of hemispheric specialization with split-brain research, and is quite confused about the current status of memory research.

In short, those areas that Thompson covers well - the organization of the brain as an electrochemical organ - is covered very well. But the student is provided with few guidelines for thinking about how that organ functions in the exercise of cognitive function beyond sensation and elementary movement. Even in an introductory work it would have been useful to outline some of the principles of natural computation that underlie current efforts to bridge the gap between mind and body.

J. C. Marshall

J. C. Marshall is a member of the Medical Research Council's external scientific staff at the Radcliffe Infirmary, Oxford.

A second "revised and expanded" edition of A. R. Luria's *Higher Cortical Functions in Man* has been published by Harper & Row at £33.00.

A collection of articles on *The Psychology of Gifted Children: perspectives on development and education* has been edited by Joan Freeman and published by Wiley at £24.75.

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Universities



Applications are invited for the post of Lecturer in Chinese Language and Literature. The successful candidate will be responsible for the teaching and research in Chinese Language and Literature. The post is full-time and requires a minimum of 5 years' experience in the field. The salary is £12,000 per annum. Applications should be sent to the Registrar, The University of Manchester, 13th Floor, 13th Floor, 13th Floor.

The University of New South Wales is seeking applications for the post of Lecturer in Biological Sciences. The successful candidate will be responsible for the teaching and research in Biological Sciences. The post is full-time and requires a minimum of 5 years' experience in the field. The salary is £12,000 per annum. Applications should be sent to the Registrar, The University of New South Wales, 13th Floor, 13th Floor, 13th Floor.

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All box no. replies should be sent to THES at the above address

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UNIVERSITY OF MANCHESTER
Department of Electrical Engineering
PROFESSOR OF ELECTRICAL ENGINEERING

The University invites applications for a Chair in Electrical Engineering in the Department of Electrical Engineering. Applicants should have a good academic and/or professional record in the field of electronics, with research interests in the applications of micro-electronics. Expertise in one or more of the following (or related) areas would be an advantage: signal processing, circuit design, high speed digital systems, control systems, optoelectronic techniques, magnetics, microfabrication, E.C.A.D. Under Phase II of the Engineering and Technology Programme, the Departments of Electrical Engineering and Computer Science in the University have been awarded a substantial increase in resources, including a new building, for an additional intake of 65 undergraduates. As part of this expansion, the new professor will be expected to extend the collaboration between the two Departments in the area of Information Technology, and to foster links with appropriate industrial organisations. Particulars of the appointment may be obtained from the Registrar.

Applications (2 copies, one suitable for photocopying) giving full details of qualifications, experience, research etc and the names and addresses of three persons to whom reference may be made should be sent to the Registrar, The University, Manchester M13 9PL by April 30th, 1986. Please quote reference 71/86/THES.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY
CHAIR OF PHYSICS

Applications are invited for the Chair of Physics in the University. The successful applicant will have a distinguished research record in solid state physics, particularly in the area of surfaces and interfaces, and will be expected to stimulate and expand research in this field. It is hoped that the person appointed will take up the post before the beginning of the new academic year.

Salary in the professional range (current minimum £10,000, average £22,340 and under review from 1 April 1986).

Further particulars and application forms from the Registrar.

Loughborough Lettercristine

CHURCHILL COLLEGE, CAMBRIDGE

Applications are invited for the post of College Lecturer in Economics, Finance and Accounting. The successful candidate will be responsible for the teaching and research in Economics, Finance and Accounting. The post is full-time and requires a minimum of 5 years' experience in the field. The salary is £12,000 per annum. Applications should be sent to the Registrar, Churchill College, Cambridge, 13th Floor, 13th Floor, 13th Floor.

Applications are invited for the post of College Lecturer in Economics, Finance and Accounting. The successful candidate will be responsible for the teaching and research in Economics, Finance and Accounting. The post is full-time and requires a minimum of 5 years' experience in the field. The salary is £12,000 per annum. Applications should be sent to the Registrar, Churchill College, Cambridge, 13th Floor, 13th Floor, 13th Floor.

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UNIVERSITY OF KENT
AT CANTERBURY
FACULTY OF SOCIAL SCIENCES
LECTURER IN ECONOMICS

Applications are invited for a post of temporary Lecturer in Economics for a period of two years with effect from 1st October, 1986. Salary according to qualifications and experience will be on the scale £20,000 - £15,700 per annum but the appointment will not be made above the seventh point of the scale.

Further particulars and application forms are available from Mr. J.E. Reilly, Secretary of Faculties and Deputy Registrar, The Registry, University of Kent at Canterbury, Kent, CT2 7NZ. Completed application forms (three copies) should be returned not later than Monday 28th April, 1986. Please quote reference number A17/86/THES.

Applications should be forwarded to the Deputy Registrar, Staffing, University of Papua New Guinea, P.O. Box 320, UNIVERSITY POST OFFICE, National Capital District, Papua New Guinea.

IRELAND
JUNIOR LECTURESHIP IN EXPERIMENTAL PHYSICS

Applications are invited for the above Junior Lectureship which is a full-time post on a permanent basis with a salary scale of £10,713 x 9 - £14,766 p.a.

The Department of Experimental Physics offers two honours degree programmes, one in Experimental Physics and one in Applied Physics and Electronics. Candidates interested in either would be welcome.

Closing date for receipt of applications: 8 May 1986. Further information may be obtained from the Registrar, University College, Galway, Ireland.

Further particulars and application forms are available from the Registrar, University of Warwick, Coventry CV4 7AL quoting Ref. No. 352/86. Please enclose a recent photograph and a completed application form. Closing date 25th April 1986.



THE UNIVERSITY OF PAPUA NEW GUINEA
(Port Moresby)
VACANCIES
LECTURER/SENIOR TUTOR/TUTOR - G821005/86

Department of Language Studies - GTC

Applications are invited from suitably qualified candidates for the above post.

Applicants should possess a degree in English or English Education (together with qualifications and experience in TESL). For appointment as a Lecturer, a higher degree is required. The Language Studies Department provides courses for students wishing to teach English in secondary schools. The Department also teaches basic language skills courses for pre-tertiary and post-vocational students.

Experience in TESL, methodology as well as in designing, writing and teaching English courses would be an advantage. Successful teaching experience at both Secondary and Tertiary levels in a developing country is especially desirable.

Applications close on 18th April 1986.

SALARY: LECTURER GRADE 2 - K19255 per annum plus gratuity

LECTURER GRADE 1 - K17165 per annum plus gratuity

TUTOR - K18015 per annum plus gratuity

Applicants will be treated as strictly confidential and should include three copies of a full curriculum vitae, a recent small photograph, and a list of references and date of availability. In order to expedite the appointment procedure, applicants are advised to contact their referees to send confidential reports directly to the University without waiting to be contacted.

Applications should be forwarded to the Deputy Registrar, Staffing, University of Papua New Guinea, P.O. Box 320, UNIVERSITY POST OFFICE, National Capital District, Papua New Guinea.

F.P. DIALA
REGISTRAR

University of Warwick
Department of Engineering

READER/SENIOR LECTURER IN POWER ELECTRONICS

Applications are invited for the above Reader/Senior Lectureship which is a full-time post on a permanent basis with a salary scale of £10,713 x 9 - £14,766 p.a.

The Department of Experimental Physics offers two honours degree programmes, one in Experimental Physics and one in Applied Physics and Electronics. Candidates interested in either would be welcome.

Closing date for receipt of applications: 8 May 1986. Further information may be obtained from the Registrar, University College, Galway, Ireland.

Polytechnics continued

Bristol Polytechnic
Department of Education

LECTURER II/ SENIOR LECTURER IN COMPUTER AIDED DESIGN/ MANUFACTURE

Applications are invited for the above post in the Academic Department located in the new building at the development of new design, with design work and industrial short courses within the industrial area of CALCEAM. The successful candidate will be expected to undertake research, teaching, administrative, and support of advanced level courses.

Applicants should have an industrial research background in at least one of the following areas: Computer Aided Design, CAD/CAM systems, CAPP, CAPA, CIM systems.

Candidates should have a good knowledge of the relevant British Standards, computer science, preferably with a higher degree.

The Department of Engineering is housed in a new building which was opened in October 1985 and provides teaching facilities for teaching, research and consultancy.

Salary scale: L1/S1: £8,076 - £15,045 p.a.

For further details and an application form, to be returned by 17 April 1986, please contact the Personnel Office, Bristol Polytechnic, Colston Avenue, Bristol BS3 3NJ. Tel: 0117 317 117.

Number 117 in all communications.

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Trent Polytechnic
Department of Social Studies

LECTURER GRADE II/ SENIOR LECTURER IN NURSING STUDIES (DISTRICT NURSING)

Applications for the above post are invited from district nurses who have been on the ENB's roll of district nurses for three years.

The post is for three years initially, renewable annually. Further details and forms of application are available from the Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 1BB. Closing date 23 April 1986. Please quote ref. no. HO483/1911601.

Manchester Polytechnic is an equal opportunities employer. 151155

Industry and Commerce

The Chartered Institute of Public Finance and Accountancy
THE CIPFA EDUCATION AND TRAINING CENTRE

The Institute is establishing an education and training centre, with premises in Croydon, to be operational from 1 January 1987. The centre will offer a wide variety of courses covering the professional examinations, post qualification professional development and multi-disciplinary courses in management and public finance. The 1987 operational programme will concentrate on the professional examination courses with a development programme for other types of course.

Initial staff requirements, to be appointed by September 1986, will be:

Head of Centre - Salary £27,000
2 Course Directors - Salary £23,000 each
The Head of Centre must be experienced in organising and lecturing on professional examination courses, organising and supervising lecturing and administrative staff, planning courses programmes and developing a full range of education and training provision as agreed with the Academic Board and the Governing Body.

The Course Directors must be experienced in lecturing on graduate conversion and/or professional examination courses, including preparation of all necessary material, and be competent to organise lecturing staff involved in the specific courses under their direction.

Further details of these posts may be obtained from CIPFA. Applications with full CV, to the Director, CIPFA, 3 Robert Street, London WC2N 6BH by 14 April 1986.

Colleges and Institutes of Higher Education

BUCKINGHAMSHIRE COLLEGE

School of Humanities, Education & Social Science

LECTURER II IN NURSING STUDIES

Required to current London University 3 year Diploma in Nursing and proposed new C.N.A.A. Diploma/Degree in nursing for post basic students.

LECTURER II IN DISTRICT NURSING

Required to contribute to Certificate in District Nursing and Practical Work Teachers course.

Salary scale: Lecturer II £8,076-£12,945-£14,046 plus Outer London weighting.

Application form and further details from: Assistant Director, Buckinghamshire College of Higher Education, Queen Alexandra Road, High Wycombe, Bucks HP11 2JZ. (Please enclose s.a.e.)

174817

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DORSET INSTITUTE OF HIGHER EDUCATION

LECTURERS (LI/SL) IN FOOD AND BEVERAGE PRODUCTION/MANAGEMENT

Applications are invited for full time lectureship in Food and Beverage Production/Management. Candidates should have had industrial experience and preferably should hold an appropriate degree, diploma and/or professional qualification. Some teaching experience or a teaching qualification would be beneficial.

LECTURER (LI/SL) IN ACCOMMODATION MANAGEMENT

An experienced manager is sought with a background in Hotel administration including the area of accommodation management. Candidates should preferably have some teaching experience and should hold an appropriate degree, diploma and/or professional qualification.

Starting date: 1st September, 1986
Salary scale: Lecturer II/SL £9,076-£12,945 p.a.
Closing date: 26th April, 1986

For further details and an application form, please contact: Staffing Officer, Dorset Institute of Higher Education, Wallisdown Road, Wallisdown, Poole, Dorset BH12 5BB. Telephone (0202) 524111 - Ext. 5031.

Administration

COLEG HARLECH BURSAR

A graduate and/or professionally qualified person is sought for this senior administrative post in Coleg Harlech, a long-term residential College for 140 adult students.

Broad managerial experience and a record of achievement in the public or private sectors are important requirements for this post. The Bursar has responsibility for the management of buildings and grounds, the supervision of domestic staff. The Bursar reports to the College Registrar.

Salary negotiable at a suitable point (depending upon age and experience) on a scale up to £12,780.
Further particulars may be obtained from the Registrar, Coleg Harlech, Harlech, Gwynedd LL46 2PU to whom applications should be sent by 21st April 1986.

174819

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LOANS TO SALARIED WOMEN
Salaried women may apply for a loan of up to £10,000 on a 10% interest rate. The loan is repaid by direct debit from the salary account. Applications should be sent to the Director, Loans, 100 Victoria Road, London W14 9JF. Tel: 0117 317 117.

BRIDGING LOANS before commencing a course
£15,000. Apply for brochure and terms from the Director, Bridging Loans, 100 Victoria Road, London W14 9JF. Tel: 0117 317 117.

BUCKINGHAMSHIRE COLLEGE

School of Art and Design, Furniture and Timber

Head of School: Ian M. Barker BA Cert Ed

PRINCIPAL LECTURER TIMBER TECHNOLOGY

£14,013-£17,619

The School wishes to appoint a Principal Lecturer to lead and co-ordinate the work of the Timber Technology section in the School. This includes a B.Sc. Timber Technology degree, a one-year Dip in Timber Technology and several part-time industrial courses.

Further details and application forms from: Deputy Director (Resources), Buckinghamshire College of Higher Education, Queen Alexandra Road, High Wycombe, Bucks HP11 2JZ. Telephone: HW 22141

Applications to be returned as quickly as possible. Please enclose s.a.e.

174817

County of Avon BATH COLLEGE OF HIGHER EDUCATION

Senior Lecturer in MARKETING/MANAGEMENT

Graduate with a higher degree and/or professional experience required to join a lively progressive Faculty and contribute to multidisciplinary Home Economics BSc (Hons) and Dip HE courses. Responsibilities will include teaching and consultancy work.

Senior Lecturer in HOME ECONOMICS

Graduate with a higher degree and/or professional qualifications required to contribute to the teaching of sociology and social studies within BSc (Hons) and Dip HE courses. Responsibilities will include teaching and research work.

Salary Scale: SL £11,958 to £15,045 p.a.

Further details of both appointments from the Administrative Assistant, Bath College of Higher Education, Newton Park, Newton St. Loe, Bath BA2 9BN (Tel: 01225 3701).

Closing date for applications: 30 April 1986.
Avon is an equal opportunities employer.

174817

King Alfred's College Winchester

LECTURER II/ SENIOR LECTURER IN ENGINEERING AND SCHOOL TECHNOLOGY

Applications are invited from well-qualified graduates for this post in the College's expanding Department of Engineering and Technology.

A person is sought with a successful record of innovation, primarily in taking responsibility for the engineering workshop and the broadening of the department's range of technological activity. Considerable progress has been made in computer applications and electronics. An ability to contribute to this development could be advantageous. The College will respond with financial and other support to the particular interests of applicants.

Successful school experience will be necessary; time in industry would be valuable.

Salary scale £15,045 - £25,076

Applications should be received not later than Tuesday 15th April 1986 by the Principal, King Alfred's College, Winchester SO9 4NT. (Tel: 01252 52521). From whom further particulars may be obtained. (151107)

174819

REMINDER

COPY FOR CLASSIFIED ADVERTISEMENTS IN THE T.H.E.S. SHOULD ARRIVE NOT LATER THAN 10AM MONDAY PRECEDING PUBLICATION

Research and Studentships

Brunel University

Department of Mathematics and Statistics

RESEARCH FELLOW

Applications are invited for a three year post in a newly created post, entitled "Concentration: Fluctuations in Atmospheric Dispersion". This work will form an important part of a research programme in the area of atmospheric dispersion, and will be directed by Professor C. C. Chiew. The successful applicant will be expected to undertake research in the area of atmospheric dispersion, and will be expected to contribute to the teaching of the subject. The salary will be in the range £12,780 - £17,619 p.a. plus 10% London weighting. The post is funded by the U.S.S. Government. The post is part of its programme of fundamental scientific research.

Applications including the names of two referees should be sent to the Principal, Brunel University, Uxbridge UB8 3PH, to arrive not later than 30 April 1986. (151171)

The salary will be in the range £12,780 - £17,619 p.a. plus 10% London weighting. The post is funded by the U.S.S. Government. The post is part of its programme of fundamental scientific research.

Applications including the names of two referees should be sent to the Principal, Brunel University, Uxbridge UB8 3PH, to arrive not later than 30 April 1986. (151171)

174817

University of Dundee

Department of Public Law

RESEARCH ASSISTANT

A full-time research assistant is required to work for one year from October 1986 on a research project in the area of public law. The successful applicant will be expected to undertake research in the area of public law, and will be expected to contribute to the teaching of the subject. The salary will be in the range £9,076 - £12,945 p.a.

Applications should be sent to the Principal, University of Dundee, Dundee DD1 1TA, to arrive not later than 30 April 1986. (151171)

The salary will be in the range £9,076 - £12,945 p.a.

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Overseas continued

NEW ZEALAND
CHRISTCHURCH TEACHERS COLLEGE

Principal
Salary NZ\$70,000

Applications are invited for the position of Principal of the College to be taken up from the beginning of July 1986.

The appointee will be the academic and administrative head of the College with responsibility for:

- pre-service preparation of teachers at the early childhood, primary and secondary levels;
- in-service training for teachers in education of the deaf and special education;
- provision of continuing education programmes for teachers, in association with the Department of Education.

The appointee will be College Council's Chief Executive Officer and Chairman of the Academic Board, and will have particular responsibility for co-ordinating and developing the activities of the College as a whole.

This position calls for a sound knowledge of educational principles and practices as well as the highest qualities of leadership. It will also demand a capacity for planning, organisation, and negotiation of a high order involving liaison and consultation with other tertiary institutions, schools, employing authorities and the Department of Education.

Further information may be obtained from the Registrar, Christchurch Teachers College, P.O. Box 31 065, Ilam, Christchurch 4, New Zealand, with whom applications close on 29 April 1986. Applicants are asked to have at least two referees send confidential reports direct to the College by Friday 2 May 1986. Envelopes containing applications should be marked "CONFIDENTIAL".

174832

Adult Education

ASSISTANT DIRECTOR/
FIELD CONSULTANT

After eight years, Elspeth Cordy is leaving ALBSU and we are seeking to recruit her successor, to join our small London based team.

Candidates should have substantial experience in adult literacy, numeracy or related basic communication skills work with adults as well as enthusiasm and commitment to the general development of basic education in England and Wales.

ALBSU is the central focus for adult literacy and related basic skills work in England and Wales and is grant aided by the Department of Education and Science and the Welsh Office Education Department. Among its functions, ALBSU sponsors a significant number of development projects, co-ordinates and provides training, produces and publishes materials and offers a consultancy and advisory service to LEAs and voluntary organisations.

ALBSU staff are based in London, although a considerable amount of travelling throughout England and Wales is essential. The commencing salary will be between \$17,265 and \$18,472 on the National Joint Council Scales plus \$1,317 London Weighting Allowance.

Further details and application forms may be obtained from:

The Director, Adult Literacy and Basic Skills Unit, Kingsbourne House, 229/231 High Holborn, London WC1V 7DA. Telephone: 01-405 4017

Closing date for applications is April 30, 1986.

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The University of British Columbia

Department of Mathematics

GEOMETRY/ TOPOLOGY

Applications are invited for a tenure track position to fill a vacancy in the Department of Mathematics, The University of British Columbia, Vancouver, Canada V6T 1V4.

For the academic year commencing July, 1986. This position is subject to final budgetary approval. Candidates must have a Ph.D. and demonstrated excellence in research and ability to teach undergraduate and graduate courses in the Department.

Salary commensurate with experience and research record.

Applicants must include a complete C.V. and arrange for at least three letters of reference to be mailed directly to the Department of Mathematics, The University of British Columbia, Vancouver, Canada V6T 1V4.

Applications received after May 31, 1986 will be considered on a position remains unfilled.

In accordance with Canadian Immigration regulations, priority will be given to Canadian citizens and permanent residents of Canada. (151188)

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Holidays and Accommodation

BRICOLL HOUSE HOTEL, 200 single rooms, £25 per week, partial breakfast, London SE1 4XP. Tel: (01) 742

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Awards

NATURAL ENVIRONMENT RESEARCH COUNCIL

SPECIAL TOPIC PROGRAMMES

Council's Special Topic scheme provides funds to stimulate multidisciplinary research in priority areas in the sciences of the natural environment and in particular to promote collaboration between academic departments, NERC research institutes and other bodies.

NERC announce six Special Topics for 1986-89, tenable from October 1986. Applications will be invited for research grants, training awards and fellowships in the following areas:

1. ATMOSPHERIC CHEMISTRY - measurement of atmospheric constituents, chemical transfer across air/surface boundaries, climate change.
2. AGRICULTURE AND THE ENVIRONMENT - environmental consequences of changing agricultural practice (arable crops, grasslands and uplands). This Programme will be co-funded by the Nature Conservancy Council.
3. ANIMAL ECOTOXICOLOGY - response of organisms, communities and processes to combinations of chemicals causing environmental damage.
4. BIOTECHNOLOGY - prediction of environmental consequences of the release of genetically manipulated organisms.
5. MARINE GENETICS - Visiting fellowships: application of genetic techniques to problems in physiology, biochemistry and ecology and marine organisms.
6. FLUID PROCESSES - physics, chemistry and mathematical aspects of fluid flow and interactions in porous media in relation to problems of diagenesis, metamorphism, fluid-rock interactions, fluid movement, heat transportation and formation of ore deposits.

The closing date for receipt of applications will be 12 May for 1 - 5 (outline proposals) and 1 June 1986 for 6 (full proposals).

UK Researchers interested in any of these Special Topics should request further information and application forms from: 1 - 4: Dr R.C. Padgham 5: Dr P. Williamson 6: Mr E.F. P. Nickless

Natural Environment Research Council

Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1EU Tel: 0793 40101

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